This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

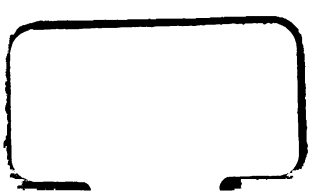
+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

COUNTWAY LIBRARY
HC 2MXT T

CARMICHAEL ESSAY



To Mrs Walter Patrick

Date from 30th 1870.

W. H. Gam

Z.O.G.

South Carolina,

First Carmichael Prize.

THE

MEDICAL PROFESSION:

AND ITS

EDUCATIONAL AND LICENSING BODIES.

BY

E. D. MAPOTHER,

M.D., QUEEN'S UNIVERSITY,

Professor of Anatomy and Physiology, Royal College of Surgeons, Medical Officer of Health, and Surgeon to St. Vincent's Hospital.

"Unite and Prosper."

DUBLIN:
FANNIN & CO., 41 GRAFTON-STREET.
LONDON: LONGMAN AND CO.
EDINBURGH: MACLACHLAN AND STEWART.
1868.

BOSTON MEDICAL LIBRARY
IN THE
FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE

THE President and Council of the Royal College of Surgeons in Ireland desire it to be understood, that they are not responsible for the opinions expressed in the Carmichael Essays.

CORRECTIONS.

Page 36, line 12, for "senior" read "junior."
Page 55, line 34, for "5,000" read "50,000."
Page 132, line 17, after "centuries" insert "old."

PREFACE.

THE following Essay, to which the first Carmichael Prize has been awarded, was lodged on the 1st February, a motto and the following notice being prefixed: "The writer of this Essay submits three printed proofs, having found that the scrivenery of as many copies would be nearly as expensive, and would produce the matter in a bulky and not very readily legible form for adjudication. The writing of competitive essays in an author's own hand has been very generally considered objectionable." Being aware that the adjudication would be made by three members of the Council only, I did not feel myself disqualified for the competition by the fact that I had the honour of a seat at that board. I took no part in the selection of the judges, I did not avail myself of any sources of information to which as a Councillor I might have had access, and studiously, and I believe successfully, endeavoured to keep my authorship unknown.

With a view of rendering the Essay intelligible to legislators, to whom, according to the testator's wish, copies are to be sent, and useful to those choosing a profession, some topics which my brethren may

think unnecessary have been introduced. Such information is, however, at present only afforded by introductory lectures which come too late to aid deliberation. I feel that apologies are due for many faults of style and other shortcomings, but those who know the distractions of a busy professional life, will be lenient judges. Three-fourths of the Essay was written during the Christmas vacation, and as the day for lodging it approached, the remainder had to be very hurriedly arranged. As it is right that the Essay should appear just as it was when submitted for competition, no additions have been made during the three months which have since elapsed.

I regret I cannot present and discuss the "Scheme of Medical Tuition," published (*Lancet*, April 4th, 11th, and 18th) by Professor Parkes, for like all the essays of that philosopher, it is profoundly learned and thoroughly sensible. He urges that the primary or scientific subjects should be taught tutorially and demonstratively during the first two years, and that practical medicine and surgery should be the exclusive business of the third and fourth.

E. D. MAPOTHER.

125 *Stephen's Green*,
May, 1868.

CONTENTS.

Part I.—The Medical Profession.

	page.		page.
Place and Power of Medicine	1	Public Services—Navy, &c.	40
Literary and Scientific work	3	State Medicine—Hygiene,	43
Unselfish devotion ..	4	Coroners	47
Statistics of practitioners..	5	Proposed Medical Supervisors	51
Parliamentary Representation	7	Poor-law Service	56
First incorporation ..	11	Infirmary and Asylum Service	65
Unity of Medicine ..	13	The general practitioner ..	68
Efforts to procure Reform	16	Pharmacy	73
The Medical Act, 1858 ..	21	Medical Societies.. ..	84
Requisites for success ..	29	Quackery	89
Medical Ethics	33	Homœopathy, &c. ..	91
Public Services—Army ..	3.	Advertising quacks ..	98
		Enlightenment the Remedy	103

Part II.—Education.

Preliminary and moral Education	107	Modes of Election to Hospitals and Schools ..	134
Proposed collegiate residence	114	Lectures	139
Students' recreations ..	117	Dissection	145
Professional Education ..	118	Proposed order	155
Hospitals	120	Multiplicity of Schools ..	157
Special Hospitals	130	Catechetical Instruction ..	169
		Reading	172

Part III.—Examination.

The Licensing bodies of England	184	Demonstrative Examination in Anatomy, &c.	179
Scotland	189	Licensing Bodies ..	184
Ireland	191	Table of Qualifications ..	210
University Education in Ireland	195	Compulsory State Examination	212
The Royal College of Surgeons	199	Proposed re-arrangement of Licensing bodies ..	218
Practical Examination in Hospitals	178	Views of Mr. Carmichael..	221
		Conclusion	223

THE

MEDICAL PROFESSION

AND ITS

EDUCATIONAL AND LICENSING BODIES.

PART I.—The Medical Profession.

"Homines ad deos nullâ re proprius accedunt quàm salutem hominibus dando." Such was the conception of even the heathen philosopher of the greatness of medicine; and his words, which form the motto of the Carmichael student prizes, may well be prefixed to this essay. To dwell on the benefits the science of medicine has conferred on mankind, and is still more capable of conferring, may seem superfluous; but, inasmuch as it confessedly does not hold that rank to which its importance entitles it, I shall here briefly enumerate its objects and its powers.

Medicine has too often been regarded as merely an art for curing the sick, whereas its field is vastly more extensive. The preservation of the health of individuals and of communities by the exercise of all the laws of hygienic science, the prohibition of adulterations in articles of food and of medicines, the management of public institutions as regards ventilation, diet, or prevention of contagion, and the suppression of epidemics, form also its most legitimate objects. How invaluable is its aid in relation to the laws concerning lunacy, the discovery of crime, and such subjects of vital interest to the State? A great poet aptly translates the words of the greatest:

> "The learn'd physician, skilled our wounds to heal,
> Is more than armies to the public weal."

The eloquent author of "Ecce Homo" exclaims: "No man who loves his kind can in these days be con-

tent with waiting as a servant upon human misery, when it is possible in so many cases to anticipate and avert it. Prevention is better than cure; and it is now clear to all that a large part of human suffering is preventible by improved social arrangements. . . . When the sick man has been visited, and everything done which skill and assiduity can do to cure him, modern charity will go on to consider the causes of his malady—what noxious influence besetting his life—what contempt of the laws of health in his diet or habits may have caused it, and then to inquire whether others incur the same dangers, and may be warned in time. . . . Christ commanded his first followers to heal the sick and give alms; but He commands the Christians of this age—if we may use the expression—to investigate the causes of all physical evil, to master the science of health, to consider the question of education with a view to health, the question of labour with a view to health, the question of trade with a view to health; and, while all these investigations are made with free expense of energy and time and means, to work out the re-arrangement of human life in accordance with the results they give."

Even the humblest duties of the practitioner are not ignoble, although they may be inglorious. Medicine is, moreover, both in itself and the numerous other sciences it embraces, a great division of humanizing and mind-enlarging knowledge. If it be remembered that the human body is surpassingly complex, and that the circumstances which affect it are numerous and varied, it must be allowed that it is more difficult than any other branch of knowledge, and those who are masters in medicine deserve the respect of all intellectual men.

Beyond services in the prevention and cure of disease, the members of the medical profession have in all ages been distinguished for their scholarly and scientific pre-eminence. John Locke, Zimmermann, Goldsmith, Smollett, Crabbe, Sir James Mackintosh, Lord Erskine,

Sir William Petty, Linnæus, Sir Hans Sloane (an Irishman, by the way), Lavoisier, Gilbert, the discoverer of the magnet, and R. Owen, may be mentioned as a few examples, some of whom became diverted to more favoured callings. The newspaper press owes much to the medical profession; in New York alone there are at present 25 medical men on the editing list. A large proportion of the fellows of the Royal Society—that most renowned of institutions, whose fellowship is so real a mark of scientific repute—indeed, the blue ribbon of science—have been always medical men. It lately had for its president Sir B. Brodie, who esteemed the honour higher than a peerage. In some little provincial imitations of the Royal Society, however, medical practitioners are not favourably received. In opposing the claims of medicine to rank as a science, it is often alleged that discoveries in it are rare. That may be so; but such a discovery as that of anæsthetics, which give almost a foretaste of the millennium, is enough to mark a century.

The literary and scientific work of physicians has always had, and will continue to have, with the educated public a large effect in elevating their profession, and removing them from the character of mere successful traders. In a great capital such employment of leisure time will improve instead of injuring a physician's practice; but in provincial cities, where prejudices prevail, or where small-minded rivals will be found to condemn such studies, or praise him who pursues them, exclusively for them, alleging that "he does not care for practice," patients will be thus diminished.

If, however, the biographies of medical men be studied, or lists of their writings fully made out, it will be found that every great one among them had varied the routine and fatigue of practice by other studies. It may be that to these pursuits they sacrificed the leisure hours which other practitioners wasted in bed, frittered away in society, or employed in the various modes of touting

for patients. In his autobiography, Sir B. Brodie says, "The study of anatomy and physiology generally, without limiting my views merely to that which is required for surgical practice, led me to scientific inquiries, which for many years afterwards formed a most agreeable addition to the drudgery of my every-day duties." The cultivation of the accessory sciences also tends to preserve medicine as a noble profession to be followed with disinterested zeal, as in the days of the Father of Medicine, and not as a trade for the procuring of a livelihood only.

As to the unselfish and philanthropic exertions of the medical profession, it may be unnecessary to adduce testimony which is freely accorded by the just and learned. Dr. Johnson said, "I believe every man has found in physicians great liberality and dignity of sentiment, very prompt effusion of beneficence, and willingness to exert a lucrative art where there is no hope of lucre." Sir William Temple, speaking of the relative advantages of the professions, says, "Whereas the soldiers seem to have had the most honour, the lawyers the most money, and the physicians the most learning." In the words of Carlyle, "The profession of the human healer is naturally a sacred one, and connected with the highest priesthoods, or rather in itself the outcome and acme of all priesthoods and divinest conquests here below."

No class of the community is so generally free from mercenary motives; for while large fortunes are amassed by a few of the more eminent of the profession, the benevolence of all produces indifference to pecuniary considerations. Of none more truthfully than of the benevolent physicians who have laboured among our poor during epidemics can it be said, that they lived for their fellow-creatures, not themselves.

There were attacked with fever between 1819 and 1843, 560, or one-half of the physicians of Irish public institutions; and in 1847, 123, or two-thirds of the entire deaths of medical practitioners, were due to that

disease, which was, therefore, some thirty or forty times as rife among them as among the ordinary population. Many British towns, receiving afflicted Irishmen with typhus upon them, suffered fearfully in 1847; and the labours of the Edinburgh physicians especially are worthy of record.' The infirmary, overcrowded with twenty times its usual number of cases, was a huge focus of contagion, to serve in which was certain infection to doctor or nurse. Low garrets had to receive patients, in which it was necessary to kneel in order to examine the pulse or tongue. Of 22 resident physicians, 12 took the fever; of 9 attending physicians, 6 had previously the disease, and the 3 remaining now contracted it. Four of these officers were lost—a heavy tribute of the medical profession to the carelessness of the community in not providing for the approach of epidemics. Such forgetfulness of personal danger may not equal the brilliancy of military heroism, but surpasses it in usefulness, and should meet with adequate recognition.

For special services under fever and cholera epidemics, the rate of pay to physicians who are sent to treat the victims rarely exceeds half-a-guinea a-day. When the Reform Bill passes, several young barristers will be sent through the country to arrange boundaries or revise registries, and the payment will probably be ten times as much. Many examples might be adduced of the want of generosity of governments to medical men. The Grenville administration never deigned an answer to William Hunter's proposal to spend £7,000 in building a school of medicine, to endow professorships, and bestow his museum, which had cost him £100,000, if granted some crown lands out of which no profit was derived. The succeeding ministry higgled disgracefully about the sum to be paid for John Hunter's museum, containing over 10,000 preparations, the greatest monument of science and industry which man has ever left behind him. They got the bargain at £15,000, Hunter

having in mere materials expended £70,000. It was entrusted to the College of Surgeons without stipend, although £2,000 a-year must be expended in its maintenance. So great a means of national education should be supported and increased out of public funds. A small sum during life and a statue in Trafalgar-square were the rewards to Jenner, who saved many millions of lives; but as one of the Napiers was to be glorified for the slaying of nearly as many, Jenner's statue was shunted to some obscure site.

If additional evidence was needed to urge the vast importance of the profession of medicine, and the due estimate which the legislature and the public should take of it, such would be afforded in the fact that it is the largest community of educated persons in the United Kingdom. Including all civil practitioners and those engaged in the service of the State, the profession is generally believed to number not far from 20,000. In the colonies there are also some thousands of British practitioners. In Great Britain and Ireland the following analysis of the names in the "Medical Directories" for England, Ireland, and Scotland for 1859, shows the distribution of such of these gentlemen as were engaged in civil practice, and the nature of their qualifications at the passing of the Medical Act.

Medical men in London	2,531.
Do. with foreign degrees	22.
Persons who have refused to return any qualifications, (Of whom many are believed to be unqualified.)	44.
Medical men in the provinces, including Wales ..	7,741.
„ with foreign degrees	33.
„ who refused to make return ..	245.
(Of whom many are believed to be unqualified.)	
„ in Ireland	1,836.
„ in Dublin alone	364.
„ who refused to make return ..	197.
(Of whom many are believed to be unqualified.)	
„ in Scotland	1,441.
„ who refused to make return ..	135.
(Of whom many are believed to be unqualified.)	

The number of medical men engaged in the public services in the three kingdoms exceeded 2,000. The numbers at the present day very slightly vary; in Ireland, however, there are 2,721 registered practitioners. In the cities the number of practitioners, both absolutely and in proportion to population, have greatly increased during the past forty years. In 1825, the proportions to the population in London of physicians was $\frac{1}{7000}$, of surgeons $\frac{1}{1200}$, and of apothecaries $\frac{1}{780}$; while in Paris it was, physicians $\frac{1}{1333}$, surgeons $\frac{1}{3333}$, and apothecaries $\frac{1}{4000}$. The proportions now in London are much more similar to those of Paris. At present in Dublin there are 29 resident fellows of the College of Physicians, 76 fellows of the College of Surgeons, and 54 apothecaries keeping open shops.

It must be admitted on all hands that the importance of the profession of medicine is not fully recognised, many causes having contributed to degrade it from the position it should occupy. Foremost among them is the fact that the public, uninformed on the functions of the human body, have imperfect means of judging of the comparative merits of those who treat their derangement. The superficial and boasting presumer is many a time the favourite with the vulgar, to whom the well-informed and honorable practitioner will offer neither flattery nor false hopes. Another, is the absence of just rewards, such as elevated positions in the State, for its most distinguished promoters, which would stimulate the talented and refined to adopt it as their calling. It is almost universally acknowledged that the educated and enlightened classes are not adequately represented in our country's senate. It was, however, confidently hoped that this anomalous state of things would cease as soon as the Reform Bill became law, but that measure only enacted that the London University should have a representative, and it is to be feared he will not be chosen from the medical profession. No impartial man could

then deny the importance of having members of the medical profession, who could there be consulted on the numerous questions relating to public health to be discussed. The other learned professions are most amply represented in both upper and lower houses, for instance, over 100 members of parliament are practising barristers, and no just reason ever has, or probably can, be adduced why medicine should not enjoy similar invaluable privileges. The main objections urged to medical representation in parliament is, that no profession or calling is directly represented; be that as it may, the clerical and legal professions and commercial and other callings have very many advocates there. But if the profession is not to have special members of parliament, the licensing bodies may fairly seek the privileges which the universities have so long enjoyed, and if they amalgamated, as shall be hereafter advocated, such a just concession could not be long denied. Licentiates of five years standing might share the franchise with fellows of the colleges.

It may be said that the university representatives represent medical men, but how few of the constituents of Oxford, Cambridge, and Dublin are doctors of medicine, and when was a member of the profession chosen? Even in the London University, where half the constituency is medical, and where half the places on the senate and committee of convocation have been bestowed on the profession, there appears to be no chance for a medical representative. The inability of medical men to make themselves heard in parliament renders them liable to have their interests—which are as well, in most vital respects, the interests of every man, woman, or child—overlooked or despised. The intimate knowledge of mankind, psychical as well as corporeal, which they must acquire, would render their opinions valuable and their decisions judicious. It may be objected that as medical men derive their incomes from the active exercise of their pro-

fession, they could not afford to relinquish such emoluments. This is assuredly fallacious, as many distinguished and disinterested individuals would submit to such pecuniary sacrifice for so grand an opportunity of administering to the public good, and a leader in Dublin has already volunteered. Besides, there are some positions in the legislature (and there should be more) where their services could be recompensed. In the United States, many high senatorial and other offices in the government are filled by medical men; for example, Dr. Sheldon was Speaker of the House of Assembly. On the Continent, likewise, medical men frequently fill representative positions, *e.g.* Virchow. The great Haller, whose mind had undergone a very appropriate course of training for such duties, was the originator of many legislative and social improvements in Switzerland. As the sittings at Westminster take place at night and for but a short period of the year, many London practitioners who now reside in the country during night, might attend with but little personal or pecuniary sacrifice. If precedent be asked for, we point to Radcliffe, the greatest benefactor of Oxford, Friend, and Mead, who all served their country in this position. There are at present three retired medical men in parliament, Sir John Gray, Dr. Brady, and Mr. Vanderbyl; and one practising surgeon, Mr. Clement. It is much to be regretted that the candidature of such distinguished members of our profession as Sir Charles Locock and Mr. Mitchell Henry has been unsuccessful. The latter gentleman canvassed Manchester in November last, and many of the medical men gave him energetic support—others declared that they preferred to follow party considerations.

It is unpleasant to have to record, that efforts were made some years ago by one of the largest medical corporations against presenting a petitition to the crown for parliamentary representation. How different was the course the profession in Dublin adopted, the influential

demonstration in Morrison's Hotel during June, 1841, exhibits; and since then many fellows of the College of Surgeons, and foremost among them Dr. Mackesy, have urged the matter. Acts of parliament making has been heretofore regarded as the exclusive province of the politician and the lawyer, but many of them concerning the duties of medical men indicate the want of intelligent supervision which our profession alone could give. The glaring defect of our system of legislation is, that fragmentary measures, called for by some passing necessity or temporary alarm, are enacted; the Act for controlling the sale of arsenic and the Bill in 1853 for the "prevention of glanders," may be taken as examples, from which it might be inferred that there were no other poisons or no other contagion to be guarded against.

There is no just reason why eminent scientific services and the benevolent exercise of the healing art throughout a whole life should not be rewarded with even the highest position in the gift of the State. Eminent divines, great lawyers, brave soldiers, rich and powerful citizens in scores, and one popular author, have been ennobled, but no physician has been thus rewarded by his sovereign. Some years ago, the elevation of Sir B. Brodie, then the illustrious President of the Medical Council and of the Royal Society, to the peerage was advocated, and would have been received by the public, as well as 20,000 members of an enlightened profession, with the greatest satisfaction. It has been objected that such an hereditary honour should not be conferred, inasmuch as the title might descend on a successor who, in wealth and other endowments, could not fitly sustain the dignity. This argument, if it have any weight, applies with equal force to peerages conferred for eager partizanship, senatorial ability, forensic talent, or military achievements, as it cannot be ensured that these peculiar powers will be hereditarily transmitted. However, in the special instance just named, no such excuse could have

availed, as the President's eldest son, Mr. B. C. Brodie, Aldrichian Professor of Chemistry at Oxford, might have worthily inherited his father's honours.

Peerages for life only, if not considered impolitic on other grounds, might be instituted. On the Continent many such names as Dupuytren, Larrey, Boyer, Humboldt, and Liebig have graced the peerage. Although no one would deny such dignities to the bar in this country, yet it may be questioned whether Lords Sidmouth, Cullen, Denman, and Kingsdown more efficiently served their country than their fathers, illustrious medical men, and therefore more fully deserved its gratitude and highest honours. While there is no instance of a member of the profession having been elevated to the peerage for service in that calling, the instances of Lords Glenbervie and Langdale may be cited as examples of doctors who so raised themselves by adopting law as the ladder; and Dr. Smithson's elevation to the Dukedom of Northumberland in 1766 may be attributed to an aristocratic marriage. His grandson was a munificent benefactor to the museum of the College of Surgeons when Lord Lieutenant.

FIRST CHARTER.

Before tracing the efforts of the profession to obtain reform, it will be necessary to display the disorganised state into which it had fallen. It is not within the scope of this essay to dwell on the history of medicine, which would be necessarily a record of the successive discoveries and brilliant lights of this science which centuries have produced, but rather to review the enactments and charters which have influenced its progress.

The practice of medicine and surgery, professed by the ministers of religion from the early ages, had been regarded as one indivisible art, and the works of those most wonderful writers of ancient times, Hippocrates, Galen, and Celsus, treat of all diseases and accidents alike. An act passed in the third year of the reign of

Henry VIII. (1511) declares "the science and cunning of physic and surgery, to the perfect knowledge whereof be requisite both great learning and ripe experience," to be one and the same. However, an edict of the council of Tours (A.D. 1150) had separated from physic the practice of surgery, avowing amongst other things that the Church abhorred blood. Surgery, thus despised and rejected, was gladly appropriated by the barbers, who tacked it to their humble calling, and actually obtained, in the first year of Edward IV., incorporation as "barber-surgeons." The first public position the great Mead attained was, "Lecturer on Anatomy to the company of barbers and surgeons." This union was not virtually dissolved till 1745 by George II. 18 c. 15. The insignia of their trade are even emblematic of their having retained the practice of phlebotomy, the pole being figurative of the fiddling-stick, the red band round it, of the fillet, and the basin at the end, occasionally retained, representing the vessel to receive the blood. The first body which was incorporated for the licensing of medical practitioners was the Royal College of Physicians, London. On September 23rd, in the tenth year of his reign, Henry VIII., through the influence of Cardinal Wolsey, granted this charter to John Chambre, Thomas Linacre, Ferdinand de Victoria, Nicholas Halsewell, John Francisci, and Robert Yaxley. Before this period, candidates were licensed by the Bishop of London, who might summon four practitioners to assist him in examining them. Any intrusion upon the rights of the licensed was diligently prevented, and even one prohibitory clause is directed against females, who, it would appear from the following passage in the "Fairy Queen," meddled in chirurgery:

"So prospered the sweet lass, her strength alone
Thrust deftly back the dislocated bone,
Then culling curious herbs, of virtue tried,
While her white smock the needful bands supplied,
With many a coil the limb she swathed round,
And nature's strength return'd, nor knew the former wound."

Indeed in the sixteenth century tending the sick was popular among ladies in only a less degree than the fostering of intrigues. Surgery is probably the older branch, for the out-door healthy habits of the early human race must have prevented many diseases; but warfare occasioned many wounds from the earliest dates. The separation it must be allowed is very ancient, for the oath of Hippocrates has the following item—"cutting for the stone I will not meddle with, but leave it to the operators in that way." Celsus on the other hand contends that on account of the "luce operta" surgery is the greater science. The very many bodies which have been chartered have tended to divide most unnaturally the healing art into the two branches, physic and surgery. During the present century their re-union has been often advocated, especially by Mr. Lawrence, and in this country earliest in an introductory lecture at the Richmond Hospital School (1827) by the great Carmichael, with all the enthusiasm of his character. In mentioning for the first time the name of that great man, one of the most noble-hearted who ever graced the profession of medicine, I may be permitted to say, that his contributions to its science were only excelled by his disinterested exertions to elevate it as a calling. He was in truth a legislator in medicine. The constitution of the councils of the Royal Colleges from only metropolitan practitioners, who direct themselves exclusively to one branch of medicine, has also conspired to subdivide the healing art. However, in cities all surgeons practise physic; thus, Sir A. Cooper, the most popular surgeon of this century, had always twice as many medical as surgical patients.

The separate interests of licensing bodies have contributed likewise to this very undesirable result. It is manifest that in the human body, the object of all their care, no such division exists which would warrant the separation of physic from surgery; and diseases, whether

internal or external (or so-called medical or surgical), depend on similar local or much more frequently constitutional causes. If the physician were to treat all cases in which internal or constitutional causes had influence, and the surgeon those dependent on external circumstances alone, the apportionment would be like that of the husband who, in a deed of matrimonial separation, proposed that he should have the inside of the house, his wife the outside!

The striking progress which surgery has made during the last quarter of a century is due much more to the study of disease usually considered medical, than to external manifestations, or to improvements in handicraft. Whether was John Thomson, who successively filled the chairs of surgery and medicine in Edinburgh, a physician or surgeon? and whether have his treatise on "Inflammation," Brodie's "Pathology," Skey's "Hysteria," Hilton's "Rest and Pain," served physic or surgery more? Whether were Hunter's and Bell's discoveries medical or surgical? Is epistaxis merely a surgical case? Or what physician has written as able a monograph on croup as Surgeon Porter?

There is truly no line of demarcation between the two, and no one would now presume to treat surgical disease or accident without being able to manage the various constitutional or visceral affections which may arise.

In large communities, indeed, the physician may apply himself to the study of one subject or speciality with advantage; but, as in less crowded situations, and anywhere on emergency, he may be called on to exercise any department of the healing art, he should be therefore qualified in all, at least by education. Up to the thirteenth century physic was practised by the clergy alone; but surgery, which was only a most imperfect art, they despised, and it fell to their servants and the barbers. By decrees of the Pope and resolution of the

university the two occupations were dissevered, and the separation thus remained as licensing bodies grew up, through a reverence for the antiquated. In Italy these branches were kept distinct up to 1451, even those physicians who were not clergymen being forbidden to marry. In the law there is no such distinction made, at the educational stage at least; but as tastes or circumstances direct, the barrister may become afterwards distinguished as a criminal, nisi prius, or chancery lawyer. I would, then, urge that no one-sided or special examinations should be allowed. The late most wise regulation of demanding a knowledge of internal as well as external pathology and therapeutics from candidates for the diploma of the Royal College of Surgeons, London, and other surgical bodies, will do much to accomplish their re-union. The Royal College of Surgeons in Ireland, from the day of the incorporation to the present hour, has never recognised the absurd distinction. The London College of Physicians until lately rigidly enforced the separation, and it is said that its president (Sir H. Halford) refused to bleed a friend who while travelling with him had an apoplectic fit, although that surgical operation would have saved his life.

In the third part of this essay the union of the profession will be fully discussed; but as to the title of the members of the united body, that of "physician" seems preferable and more comprehensive, as implying the student of nature, whereas "surgeon" refers to a mere handicraft. However, the best etymologists assert that the word in the Old Testament, which occurs therein four times and is usually translated "physician," really means one who stitches a wound.

The only branch of the profession which it is very desirable should in cities be practised separately is obstetrics, for attendance on surgical cases, and in a greater degree anatomical pursuits, on the part of a practitioner, render his visits to lying-in women very hazar-

dous. The isolation of the pharmaceutical art will be advocated presently.

At the commencement of the present century, practitioners in England were chiefly licensed by the College of Physicians, and the College of Surgeons, established in 1800; and the Apothecaries' Company exercised their legitimate office of licensing persons to practice pharmacy. But this latter body being ambitious, despising the calling they were trained for, and seeing the College of Surgeons neglecting to examine candidates in medicine and collateral subjects, and altogether apathetic, succeeded in 1815 in gaining the power of examining and licensing general practitioners in conjunction with the College of Surgeons. There were besides numerous foreign graduates and very many unlicensed practitioners.

In recording the efforts of the profession to alter many undesirable conditions into which it had lapsed, I shall endeavour to avoid repetition as much as possible, lest the subject should become as tiresome as an article with the oft-repeated heading "Medical Reform" was to some a few years ago. The first agitator in this cause was Dr. Harrison of Horncastle, who, in 1807, vigorously exposed the disorganised state of the medical profession. In 1826 Mr. Courtenay endeavoured to introduce a medical bill, but no efficient steps in the matter were taken, as the profession itself was divided, and the institution of the British Medical Association became a necessity. Founded in 1832 by Sir Charles Hastings, this association has been a powerful means of raising the medical profession in a moral, a social, and a scientific point of view. Its declared objects are to promote and diffuse medical science, and to maintain the honour and interests of the profession. Its annual addresses are marked by extraordinary learning, and in them all the members may hear a *resumé* of what has been done in each branch at home and abroad. For the yearly

subscription (one guinea) every member receives the weekly journal, which is edited with extreme ability.

A great congress of the profession assembled in the theatre of the Royal College of Surgeons, 29th May, 1838, and adopted, among others, the following important resolution: "That it is therefore our opinion that a legislative measure should be sought for by us to unite the medical profession of Ireland into a corporation, upon such principles as shall constitute them one national faculty, and thereby identify, in feeling and interests, the great mass of provincial practitioners with their metropolitan brethren." Previous to this congress the College of Surgeons unanimously expressed itself in favour of such a union, while the proposition to entertain the question at the College of Physicians was negatived by 22 to 3. Thirty years have made surprising changes, and the latter body will not scout so readily propositions which will be made in the third part of this essay. The profession was then, and indeed is still, governed by so many corporations, that no union was to be found when its interests were at stake. How different is the case of other professions, employments, or even trades?

There was established then, as a result of the congress, two great instruments of reform—the Medical Association of Ireland and the faithful chronicle of its proceedings, the *Medical Press*—to which, as space will not allow me to record its proceedings very fully, I will refer. Mr. Carmichael was chosen president, Dr. H. Maunsell, whose medico-political services have been immense, secretary. It has since met annually, and at all times when the interests of the profession were at stake, and has thus conferred great benefit. The American Medical Association, founded in 1847 after the models of the British and Irish, has done incalculable service in elevating the profession in that country.

Mr. Warburton, in 1839, nearly succeeded in obtaining legislation. His bill provided for the registration of

licensed practitioners, and for the equalizing of qualifications. He did not provide against quackery by legal measures, believing that such remedies were impracticable, and that the diffusion of physiological knowledge constituted the chief weapon against this fearful evil. It was at this juncture a forcible letter to Sir R. Peel, then premier, appeared from Mr. Carmichael, in which he allowed that the subject was most difficult and uninviting for a statesman, as so many conflicting interests existed. He urged uniformity of examination, the union of physic and surgery, and the separation from both of the practice of pharmacy—as thus would be created a valuable practitioner for all classes of society, while the usefulness and status of the pharmacien would be augmented by incorporation into a college. He allowed that the middle classes of society, and all persons in remote districts, would be best suited by an attendant who should supply as well as prescribe medicines, not charging for them, but for the advice—in fact, the reverse of the existing system. In order to equalize qualifications, he proposed the formation of three faculties—one for England and Wales, one for Ireland, and one for Scotland, which were to govern each country's medical men. Mr. Carmichael lamented the depreciation of the medical calling in public estimation; while the choice of the law or the church raised a man's social position, devotion to medical science lowered it. So disorganised was the profession just now, that Professor Macartney exclaimed, "I am quite satisfied that it would be better for society that the profession was altogether abolished, than that it should be suffered to continue as at present constituted."

In 1840 a bill was introduced by Messrs. Warburton, Wakley, and Hawes, to register practitioners on payment of an annual tax (a most objectionable clause), and to constitute one body or faculty for each division of the empire, the members to have votes (collected by post)

for the council. It was to remain in force till 1860. Some time after, Mr. Hawes proposed to compel every one who had taken a degree or diploma, or who should hereafter take one, to undergo a second examination. As a re-examination would be only dreaded by those who had entered the profession with too great facility, this proposal was approved of by a committee of the College of Surgeons on 6th February, 1841, but elsewhere it met with great opposition.

To show that increased education (and perhaps, therefore, increased expense) will not diminish injuriously the number of medical men, let me quote Mr. Carmichael: "I know that some political economists contend that if the education of medical men be expensive, the cost of employing them must be proportionally high. To this I answer, that it would be wiser to give a fair price for any article we want, or even to remain without it, than to purchase one ill-manufactured and of bad materials. But in my opinion the objection that one grade of well-educated medical men will be either too few or too high in price to meet the wants of the people, is altogether fanciful and founded on prejudice and error; and while there is an abundant supply, the *res augustæ domi* of the young, and too often of the old, will furnish a host of practitioners to meet the means of remuneration of all those who seek their assistance."

In 1844, Sir James Graham and Mr. Sutton brought in a bill which proposed the formation of a Council of Health and of Medical Education and Registration, to be elected by the crown. It provided for two grades in the profession—viz., physician and surgeon, and licentiate in medicine and surgery, the latter to be examined by the Colleges of Physicians and Surgeons, and in England by the Society of Apothecaries, who were also to license a class of pure pharmaciens. This bill aborted owing to the conflicting interests of the various medical bodies. Had they but attended to the great principles

put forward recently by Mr. Carmichael, they would doubtless have succeeded, for the profession was ripe for improvement. It was about this time that the profession had become so overcrowded, that many proposals were suggested for thinning its ranks, especially for preventing such numbers continuing to graduate. This state, indeed, lasted till the breaking-out of the Crimean war. The oppressive, almost despotic measure of numerical limitation was even advocated—a system which has worked most injuriously in Bavaria and elsewhere. Again, it was suggested to increase very greatly the cost of medical education. The proposed fees were so high, that they would deter many a deserving though indigent student, and were altogether unsuited to the impoverished state of the country then existing. In fact, the fees had to be, in 1847, considerably lowered, and they were not again raised to the same rate until 1863. A greatly extended period of study was also advocated—a topic which will be elsewhere discussed; but there can be no doubt that if such an overcrowded state should again occur, the appropriate remedies would be an increased preliminary and professional education, and greater stringency of examination. Mr. Wakley, in 1847, attempted to obtain registration and equality of qualification by all the bodies submitting their regulations to the Secretary of State. In more recent years the exertions of Mr. Cowper, Mr. Headlam, Dr. Brady, Lord Elcho, and others in the House, and many an effective pen out of it, are so fresh in the recollection of all, that they need no mention here. The profession has cause for gratitude not only to the professional, but also the general press. Mr. Brady's Registration Bill of 1854 met with great opposition from the quacks, thirty-three petitions from the Medical Botanists, or Coffinites, one signed by 4,180 persons, having been presented against it. The latter name would seem appropriate, for in the four previous years fifteen cases of poisoning by the drug lobelia, given by them, had occurred.

The laudable efforts made by the Colleges of Surgeons during the months of June, July, and August, 1856, to obtain registration and improved preliminary and professional educational arrangements, tended much towards a settlement of the question. The Colleges of Dublin, London, Edinburgh, and the faculty of Glasgow, were unanimous; and Drs. Williams, Hughes, and Maunsell, Mr. Lawrence, Dr. Andrew Wood, and Dr. A. D. Anderson, were chosen by their respective colleges to deliberate on these improvements. These steps gradually prepared the way for, and matured the clauses of the Medical Bill prepared by that eminent sanitarian, the Rt. Hon. W. Cowper, which now rules the profession. On the 2nd August, 1858, Medicine, for the first time, was incorporated as one profession, the previous legislative enactments for separate bodies having only produced anarchy and confusion. Provision was now made for accurately registering practitioners, and thus enabling the public, and authorities in courts of law and elsewhere, to distinguish the legally qualified from the unlicensed pretender. It cannot be concealed that at present it contains no power for suppressing quackery, or preventing some other callings from practising medicine and surgery. It only provides that quacks shall not assume medical titles; but by the crafty omission of letters from these, or the assumption of somewhat similar initials, they escape prosecution.

This, the only general act controlling the profession is, however, faulty in many particulars, and has not been amended from want of unanimity among the profession, and from want of interest in the subject evinced by the Home Office. Just now political disturbances are so threatening that this and other social matters must wait for amendment; but two Home Secretaries have suggested that amendments should be entrusted to private members. The council does not appear to be a very favoured child at Downing-street, for the accommo-

dation of a place of meeting has been persistently refused. As the Medical Act contains more than the average of redundant verbiage, it will be more useful to submit the following analysis of it, notes on its working and suggestions being made upon the several clauses.

Preamble.—Whereas it is expedient that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners, be it, &c. *Clause* 1. Short title. 2. To begin 1st October, 1858. 3, 4, and 5. General council of twenty-three to be formed by one person chosen by each of the following bodies: Royal College of Physicians, Royal College of Surgeons, England, Apothecaries Society, Universities of Oxford, Cambridge, Durham, and London; College of Physicians, Edinburgh; College of Surgeons, Edinburgh; Faculty of Physicians and Surgeons, Glasgow; King and Queen's College of Physicians in Ireland; Royal College of Surgeons in Ireland; Apothecaries' Hall, Ireland; University of Dublin, and Queen's University, one conjointly by the Universities of Edinburgh and Aberdeen, and one by the Universities of Glasgow and St. Andrew's. If the combined constituencies could not agree upon a representative, each was to nominate a person either of whom her Majesty was to select. The crown appoints four members for England, and one each for Scotland and Ireland. The council elects a president, who may or may not be a member of the council. The three up to this elected have not been members of council, but have all belonged to the profession. It will be seen that there is no provision for representing the profession generally, except by the nomination of the crown. The general practitioners are represented by Mr. Rumsey, and able and indefatigable as that gentleman is, he cannot have much power against so many of those whose interests are identified with the corporations.

It seems but fair that the members of the profession at large, who pay or have paid for the support of the

medical council, should have a voice in the election of its members or some of them; but the executive bodies of each licensing institution at once assumed the right of electing the representative, and six were appointed by the crown. In former bills the profession was to be largely represented; under Mr. Warburton's bill the council was to be one-third lay members appointed by the crown, and two-thirds members elected by the whole profession; and under Mr. Hawe's bill one-half the council was to be elected by the medical corporations, the other by the profession at large. With regard to lay members on the medical council, there seems no more necessity for them there than among the hierarchy or the benchers, and so far from the council electing a statesman into the presidency as they were urged to do, they should have petitioned the government to give him a seat in the Upper House. The British Medical Association has declared in favour of sending representatives elected by the profession in the three kingdoms to the council. This could only be arranged by an increase of its numbers, undesirable though the multiplication of senators may be, for none of the corporations will consent to resign a seat, and the crown nominees were sent to represent the interests of the public, and their election by the profession instead of by the crown would confer no advantage. The funds of the council are wholly derived from practitioners; let, therefore, the profession representatives and the crown nominees be paid out of this revenue, and it is just that each licensing body should pay the expenses or remuneration of its advocate. The general desire throughout the profession for such a concession may be estimated by the resolution of the British Association at Dublin, 1867, and by the formation a few months ago of the Medico-Political Association of Great Britain and Ireland for this object especially.

The Medical Council at present consists of the following gentlemen.

	Former Members.
President.—Dr. Burrows.	Sir B. Brodie, Mr. Green.
Coll. Phys.—Dr. Bennett.	Sir T. Watson, Dr. Alderson.
„ *Surgeons.*—Mr. Hawkins.	Mr. J. H. Green, Mr. Arnott.
Apothec. Soc.—Mr. Cooper.	Mr. Nussey.
Univ. Oxford.—Prof. Acland.	
„ *Cambridge.*—Prof. Paget.	Prof. Bond.
„ *Durham.*—Prof. Embleton.	
„ *London.*—Dr. Storrar.	
Coll. Phys., Edin.—Dr. Alex. Wood.	
„ *Surg.*—Dr. Andw. Wood.	
Faculty, Glasgow.—Dr. Fleming.	Dr. J. Watson, Mr. Watt.
K. and Q. Coll. Phys., Dub.—Prof. Smith.	
Coll. Surgeons, Dub.—Prof. Hargrave.	Prof. Williams, Prof. Porter.
Apoth. Hall, Dub.—Dr. Leet.	
University of Dub.—Prof. Apjohn.	
Queen's Univ.—Sir D. Corrigan, Bart.	
Univ. of Edin. and Aberdeen conjointly.— Prof. Syme.	
Univ. of Glasgow and St. Andrew's conjointly.— Prof. Thomson.	Prof. Lawrie.
By Crown.—Dr. Parkes, (England.)	Sir C. Hastings.
„ Prof. Sharpey, (England.)	Sir J. Clarke. Dr. Baly.
„ Dr. Quain, (England.)	Sir W. Lawrence.
„ Mr. Rumsey. (England.)	Mr. Teale.
„ Prof. Christison, Scotland.	
„ Prof. Stokes, Ireland.	

6 and 7. Members for each country to be registered, and to act as branch council for England, Scotland, and Ireland. 8. Term not exceeding five years but eligible for re-election. 9. Council to arrange meetings, &c., quorum eight. 10. Council to elect Registrar and other officers. 11. Branch councils Scotland and Ireland to elect or remove registrars. The latter power has in one instance been most arbitrarily exercised. 12 and 13. Regulates fees, expenses, and

accounts of councillors. The fee per day at the general council for each councillor was fixed at five guineas with travelling and hotel expenses. The sum paid to each of three of the Irish members for the first year was £144 18s. for council fees, £94 for branch fees. It may be questioned whether the fees, especially for members who live in London, have not been fixed at too high a rate. Money could be with great advantage applied to scientific purposes. Dr. Acland's proposal to grant £250 for the purpose of determining the physiological effects of certain medicines before the "Pharmacopeia" was published met with little support.

14. Registrars to keep the registers, erasing names of those who have died or who fail to reply to application for six months, altering addresses, and adding new qualifications. The publication of all practitioners in one registry was the first step towards establishing a professional union, but a separate list for each country would be certainly more convenient, or at least an index by localities might be added.

15. Every fellow, member, or licentiate of the Colleges of Physicians London, Edinburgh, and Ireland; and of Surgeons, England, Edinburgh, Glasgow, or Ireland; every licentiate of the Apothecaries' Societies, London and Dublin, every doctor, bachelor, or licentiate in medicine, and every master or licentiate in surgery of any university in the United Kingdom, also any person on whom the Archbishop of Canterbury had conferred the title of M.D. before 1858, or any one giving proofs of having received the degree of M.D. from a foreign university and of being in practice in the kingdom before 1858, is entitled to register for fee of £2, or £5 for those who qualify subsequent to 1st January, 1859. Diplomas to be produced and lists from licensing bodies procured. Additional qualifications may be entered for a fee of 5s. It is wrong to charge for additions any person already registered. The income may be judged of by that in

1865 (the last published)—England, £2287 10s.; Scotland, £591; and Ireland, £785 15s.

16. Council to regulate register. 17. Persons practising before 1815 to be registered. 18. Bodies to send information to council who may be present at the examinations. 19. Two or more bodies may unite in examinations. I will hereafter strive to show the incalculable service which would have resulted if this clause was compulsory instead of permissive. The Colleges of Physicians and Surgeons of Edinburgh have alone acted upon it, but those of Dublin and London it is to be hoped will follow.

20. 21, and 22. Privy Council may on representation of Medical Council, suspend the right of any body to grant qualifications if their examinations appear to be deficient. Of course this self-immolating process has not or never will be adopted as long as the profession at large is unrepresented on the council, but they should have the power of making, with sanction of Privy Council, regulations for the conduct of education and examination obligatory on all licensing bodies. Such permissive clauses are valueless.

23. Privy Council may prohibit any body from imposing any theory of medicine as a condition of obtaining licences. This clause was procured by the lordly and hon. friends of the quacks, very much to the discredit of the British legislature, but it could not permit any quack to enter the profession, because if he acknowledged any improper mode of practice, the examiners should in conscience reject him.

24. Authentication of Privy Council orders. 25 and 26. Branch registrars to enter qualifications. 27. Register annually published to be evidence of qualification, or certificate from registrar. 28. If any body erase a name from their lists, council may erase it from their register, but not on the ground of having adopted any particular theory of medicine. 29. The name of any

person guilty of felony, misdemeanour, or infamous professional conduct shall be erased from register. The judges, in the case of the advertising quack, L'amert, decided that the council is the sole judge in this matter, no appeal lying.

30. Additional qualifications may be entered. 31. Registered persons may, "according to their qualifications," practise in any part of the kingdom, and may sue for advice, visits, or medicines—the Colleges of Physicians having power to prevent their members from suing. The honorary nature of the physician's recompense is owing to the fact that in the olden days the monks were the physicians, and they, in legal phraseology, were *civiliter mortui*. The London College of Physicians have debarred their fellows from suing. It is much to be regretted that the power of suing for medicines was conferred; but in order to remove the monopoly of the apothecaries, it may have been at first necessary. Before this Act a surgeon could recover, but if he prescribed, and wrote M.D. after his name, he was to be considered as a physician, and could not recover. The words quoted seem to indicate that distinctions in the profession, such as those of physician, surgeon, or apothecary, were to be preserved. 32. No person unregistered can recover charges. 33. Poor law officers not disqualified, if registered within six months of passing of the Act. 34. Any words describing medical practitioner to imply being registered. 35. Registered persons exempted from juries, parochial offices, militia, &c. 36 and 37. No unregistered person can hold any military, naval, or emigrant-ship appointment, act as medical officer to any public institution, except wholly supported by voluntary contributions, or to a friendly society, or as medical officer of health, nor can such grant a certificate.

38 and 39. Penalties for falsifying register, or procuring false entry. If any person not entitled to regis-

ter contrived to do so, the one year's publication would serve him as a testimonium for the rest of his life among simple people; and to avoid this, local associations of practitioners were formed in some counties.

40. "Any person who shall wilfully and falsely pretend to be, or take or use the name or title of a physician, doctor of medicine, licentiate in medicine and surgery, bachelor of medicine, surgeon, general practitioner, or apothecary, or any name, title, addition, or description implying that he is registered under this Act, or that he is recognised by law as a physician, or surgeon, or licentiate in medicine or surgery, or a practitioner in medicine, or an apothecary, shall, on summary conviction for any such offences, pay a sum not exceeding twenty pounds." Either from apathy on the part of the authorities, or difficulties from the wording of the clause, proceedings under it have generally failed. In France, since 1890, penalties have been enacted against those practising without licence, and at present even an uncertificated midwife is prosecuted. The council has also declined to prevent persons who were registered for one qualification, such as "apothecary," taking another title, such as "surgeon," but amendment of the clause was stated to be desirable. Nothing could be more unjust than allowing the possessor of an inferior title to assume any of the superior.

41 and 42. Acts under which penalties may be recovered. Payable to treasurer. 43 and 44. All moneys to be applied to expenses of Act. Accounts to be submitted to parliament and published. 45. Branch registrars to send to general registrar evidence of death of any registered person. 46. Special grace may be granted to persons practising in colonies, &c., by the council. 47 to 52. New charters may be granted to London College of Physicians, to London College of Surgeons for licensing dentists, to Edinburgh College of Physicians, to Edinburgh and Glasgow Colleges of

Surgeons for amalgamation, and to King and Queen's College of Physicians, Ireland, provided these charters contain no new restrictions in the practice of medicine or nothing repugnant to law. 53. Medical graduates of London to have similar privileges to those of Oxford and Cambridge.

54. Council to publish "British Pharmacopeia." (That just issued surpasses any ever compiled in other countries.)

55. "Nothing in this Act contained shall extend to, be construed to extend to prejudice, or in any way to affect the lawful occupation, trade, or business of chemists, and druggists, and dentists, or the rights, privileges, or employment of duly licensed apothecaries in Ireland, so far as the same extend to selling, compounding, or dispensing medicines."

By 25 and 26 Vic. c. 91, s. 1, council to have a seal and power to take lands, &c. All must applaud the wise decision the council came to with regard to publishing freely their proceedings, while it is to be hoped that no encouragement will be given to the delivery of verbose addresses which impede real business. But two members voted for publicity, while sixteen voted against it when first proposed. The practitioners of the United Kingdom performed their part in this important measure, and in three months on the Irish Registry there were recorded 1,770 names—the whole number of persons practising being, as returned by Medical Directory, only 1,836. Within the same time in Scotland, out of the qualified list, numbering 1,441, and in England, out of the 9,327 practitioners, but few remained unregistered.

A few remarks may next be offered upon the qualifications and mental and moral characteristics which usually ensure to their possessors success in medical life.

It was once a most common mistake to confound years in a medical practitioner with experience, and to suppose that by dint of repetitions anyone without talent or

training would become skilled. It is now being remembered that "mere opportunities of observation, without the aptitude to profit by them, are like light to a blind man," as was well observed by Bichat, who, although he was lost to science at the age of twenty-nine, was the most renowned of physiologists. The uneducated had witnessed the fall of entire orchards before Newton developed the first law in physics from having seen one apple drop. The student, though young in years, may be old in hours well spent; and I have generally found students of sixteen or seventeen more zealous, and, of course, less liable to succumb to temptations of a city life, than older ones. Besides, many distinguished teachers had begun before their legal majority, were famous in their next decennium; and Carmichael was president of his college when only thirty-four years of age. For such reasons I regard restrictions as to age occasionally oppressive and always unnecessary, if examinations be well organized.

It is a curious psychological fact that men's opinions undergo very great transitions throughout life, and in no profession is this more remarkable than in medicine. The newly-fledged physician, timid as yet in the use of his own powers, follows implicitly the doctrines of the teacher he most respects. This implicit obedience produces a reaction, and after a few years' practice nothing is believed in which is not new or startling. As years increase and have given time for more deliberate judgment, the practitioner relapses into the ways of those who have taught him, and is convinced that "there is nothing new under the sun." The rebuke which the famous Dr. Rush administered to an over-confident graduate is well known; he was just boasting that his studies had been now completed; Dr. Rush replied, "I am only beginning mine."

It is not given to every man that he shall occupy a high place in the medical and surgical professions. The

competition in the race of life is now more close than ever, and it is only by very peculiar endowment and exceeding industry that one can reach the summit. It has often been averred that no practitioner who has risen to a greater degree of success than his fellows, can assign a cause for his elevation—an assertion in the main unfounded. Rare instances there may be of men having "greatness thrust upon them" in this and every other walk of life, owing to such fortuitous circumstances as family connexions or wealth; but deceived is he who trusts to them, as there is no profession where such attributes have so seldom conferred distinctions; and, indeed, the patronage of the great is rarely bestowed until the deserving man can afford to despise it. Such eminence could not be sustained for any length of time without superior and peculiar fitness for the position. Apparent success, it must be admitted, is often attained by mere meretricious aids, and it is notorious that in medicine the credulous and unenlightened are apt to mistake that which they do not understand as most admirable. It is, however, on the determined, unremitting practice of industry the aspirant must look for success, and he is meanwhile cheered by the feeling that in his labour there is much intrinsic pleasure.

To make a great surgeon there is needed the gift of genius, developed by sound and comprehensive education and matured and rectified by experience. The exertions which well regulated ambition encourages, if opportunities are availed of, seldom fail to be crowned with success; yet instances occur where even persevering industry and brilliant talents do not succeed in obtaining wealth, but gain what is more valuable—the self-consciousness of having done good and the acquisition of a good repute. Happiness is incomparably better worth striving for than fortune. But exclusive of fame and distinction (too scantily bestowed on medicine), and the less worthy desire for the acquisition of wealth,

there are other promptings to stimulate. "No motive is so strong as that founded on the sympathy of the good and wise, no reward so sweet as that of being held up to admiration as a benefactor of the species, no glory so pure, so calculated to awaken great minds as immortality." Such are the words of Sir Humphrey Davy, the noblest philosopher the present age has produced. Another stimulus for exertion is that

> "which the clear spirit doth raise,
> That last infirmity of noble minds—
> To scorn delights and seek laborious days."

But higher still is the motive of exercising benevolence and charity towards fellow-creatures; and hopeful therefore were the reflections of that great surgeon, Percival Pott, who on his death-bed exclaimed, "My lamp is nearly extinguished—I trust it has burned for the benefit of others." Great acuteness of mind to form rapid, almost instantaneous, yet judicious decisions under emergency, and imperturbable coolness, are special endowments of the operative surgeon. Such qualities are not often combined in the same individual. "Although I have taught surgery for twenty-seven years," confesses the erudite Baron Haller, "and exhibited the most difficult operations on the dead body, yet I have never ventured to apply a cutting instrument to the living body for fear of giving too much pain." However, chloroform has now dissipated such fears. Cultivated judgment and accurate powers of observation are required in dealing with outward ills, and are still more necessary in the investigation of internal affections. It indeed requires patient and painstaking inquiry, profound knowledge of precedent, and great intuitive talent, to discover many of the more obscure maladies; and then, intimate acquaintance with and experience in the use of the remedies bountiful nature has furnished. No course of education can be too profound, no examination too rigorous, for those who undertake so grave and responsible a duty. It is there-

fore reprehensible that any should engage in it without due aptitude or preparation, or merely as a means of subsistence. "The physician is to be regarded," exclaims Louis, "as holding a sacred office, which demands greater sacrifices than are to be made in any other profession." From him indeed is called for complete *abandonnement de soi.*

Many codes of what is termed medical ethics have been drawn up, but those honorable feelings which should ennoble the breasts of men in every walk of life, suggest beacons to those who would follow in the footsteps of Him who, the Saviour of Man, was likewise the Great Physician. Medico-ethical rules do not differ, therefore, from the moral or ethical rules which should guide Christian gentlemen in every pursuit of life. They are such as will suggest themselves to any man of good sense and good nature who practically does to others as he would wish others to do to him. No code of ethics could be more refined or more honorable than that which the "oath of Hippocrates" contains, and which in some American universities forms the declaration which every graduate on being admitted recites. Among other wise injunctions it declares, "Whatever in connexion with my professional practice, or not in connexion with it, I see or hear in the life of men which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret."

Lord Bacon has forcibly said, "I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavour themselves by way of amends to be a help and ornament thereunto. This is performed in some degree by the honest and liberal practice of a profession, where men shall carry a respect not to descend into any course that is corrupt or unworthy thereof, and preserve themselves free from the abuse therewith the same profession is noted to be in-

fected; but much more is thus performed if a man be able to unite and strengthen the roots and foundations of the science itself, thereby not only gracing it in reputation and dignity, but also amplifying it in profession and substance." The right principles of practice are also expressed in the following declaration: "To act in the spirit of science where I can; by the mere light of experience, without scientific insight, where I must; but with the uniform avoidance and contempt of quackery in all cases."

A medical practitioner should always feel the immense responsibility of his position; the more so if junior, for he is liable to be called on to undertake the most important duty at a moment's notice, and without any possibility of aid from his seniors. Such feelings should stimulate continued study to improve the faculty of memory and judgment, so that he can be sure of doing as well for his patient as if the most eminent of his brethren were aiding him. Medicine cannot be said to be positve and exact, like mathematics, but all should endeavour to approach as near as possible to perfection. He should also be constantly impressed with a sense of moral obligation, which a remembrance of the great and sacred duty of his mission will inculcate. Trusted with confidence in the most intimate circumstances of families, there is no calling in which a breach of honour or morality meets with a more speedy or more just punishment. Again, elegance of manner and moderation of temper should distinguish the educated physician, who always makes allowance for the weakness, irritability, and caprices of the sick. Inasmuch as the public can only judge of the skill of a medical man by results, being, from want of information about the natural functions of the human body, quite unable to form a more just estimate, patients should therefore be treated with candour, the imperfections of medical science never being concealed, nor a cure magnified and

placed conceitedly to one's own credit solely. Other physicians alone are fit judges of a practitioner's actions, and therefore it is that such need exists for the highest moral and charitable tone. Many a time will the reward of a physician alone be a sense of accomplished duty to his fellow and his God. However, it must be acknowledged that such virtues as charity, honour, or self-denial are inborn or developed by sound parental training. Temperance is an indispensable quality, but so little do the public judge rightly of practitioners that many men notoriously drunken in olden times have been freely patronised.

Sir A. Cooper, in admitting members of the College of Surgeons while President, hundreds of times addressed them on the true means of success: "Firstly, on a good and constantly increasing knowledge of your profession; secondly, on an industrious discharge of its duties; and, thirdly, upon the preservation of your moral character. Unless you possess the first, knowledge, you ought not to succeed, and no honest man can wish you success. Without the second, industry, no one will ever succeed; and unless you preserve your moral character, even if it were possible you could succeed, it would be impossible you could be happy." He also stated that his own success in practice arose from not allowing any patient to leave without having satisfied them on the nature and proper treatment of their case.

The habits of physicians in regard to the enjoyment of polite society and rational amusements should be those of the rest of the educated world. It is time that such antiquated remnants of quackery as white neckcloths, exclusively black cloth, and other peculiarities of dress, should cease to distinguish the followers of a noble and most learned profession from other gentlemen. Such habits may push a trade, but they sink the science.

Under the head of general practice, some remarks on

the rate of remuneration will be made; but here it may be allowed that junior practitioners should not expect as high a rate of payment in receiving fees as frequently as their seniors. If they do, patients in cities at least will be divided between the consultants and the apothecaries. His only prospects, then, consist in the retirement of the senior when fortune is amassed, but this is a much rarer event in medicine than in other professions. While the public should never begrudge the fee of the consultant, remembering that charity urges them to refuse many a fee, he should in justice to his senior brethren, never accept a lesser sum from those able to pay. The practice of a yearly sum for attendance was usual in Ireland during the last century, and is still extant in Germany. This may not be adviseable, but while the consultant should receive his *honorarium* immediately after the visit, the junior may be content to wait till the end of the attendance, and receive payment for each visit in the proportion of from one-fourth to one-half of the consultant's fee. However, if a medical man were paid for any unusual service, such as a serious illness or accident, the plan of accepting a yearly sum as the adviser on all health subjects, does not seem objectionable.

Medical men have been mulcted or punished for malpractice, arising from ignorance, want of attention, an avaricious desire to save medicine or medical or surgical appliances, and from intent to do harm. By the statute of Henry VIII., the London College of Physicians was granted power of fining or imprisoning practitioners for such offences, and other bodies have similar powers, but it is by civil action that redress is usually sought.

Notwithstanding all the personal discomforts and mortifications the physician must endure, his life, if he pursues his profession with elevated motives, is more full of happiness than that of any other rank. Another

circumstance may gladden the seniors and cause their successors to be patient. Professor Guy, Mr. Neison, the eminent actuary, and Professor Caspar, of Berlin, have all testified to the longevity of medical men. They have shown that the average years of a general practitioner are 52·27; of a physician or surgeon, 61·18; and of the medical officers in the army or navy services, 58·52. It may be encouraging to some to record that marriage makes an additon of two and a-half years.

PUBLIC MEDICAL SERVICES.

Foremost amongst the public services which duly compensate their medical officers is the Army Medical Department, which was so much exalted and improved by the Warrant of 1858. It declared four grades—1, Inspector-General of Hospitals; 2, Deputy-Inspector-General of Hospitals; 3, Staff or Regimental Surgeon, who, after twenty years full-pay service in any rank, shall be styled Surgeon-Major; 4, Staff or Regimental Assistant-Surgeon.

The following is the Royal Warrant of 1867 for pay and non-effective pay of medical officers:

	Pay. Daily.			Years Served.		Half-pay.		
	£	s.	d.			£	s.	d.
Inspector-General	2	0	0	..	30 ..	1	17	0
Deputy Inspector-General ..	1	10	0	..	30 ..	1	5	6
Surgeon-Major	1	7	0	..	— ..		—	
After 25 years' service ..	1	7	0	..	25 ..	1	0	0
Surgeon	0	17	6	..	15 ..	0	13	6
Assistant-Surgeon, on appointment	0	10	0	(under 5) ..		0	6	0
After 5 years' service ..	0	12	6	..	5 ..	0	8	0
„ 10 „ ..	0	15	0	..	10 ..	0	10	0
„ 15 „ ..	0	17	6					

Or on promotion, should not these periods be already completed. The widow of a surgeon-major has from £70 to £100 a-year pension, and each child a small sum besides.

It is, then, in respect to remuneration, rank, and retiring allowances, a service that any disinterested adviser should recommend for adoption by young surgeons, if they do not grieve at the barriers to marriage and domesticity which it certainly presents.

As regards admission to the service, any gentleman producing the following certificates may compete: 1, age (under 28 and over 21); 2, character; 3, health; 4, diplomas in surgery and medicine. The pass examination (*viva voce*, written and demonstrative) includes anatomy, physiology, surgery, medicine, and pharmacy; but candidates are placed according to additional knowledge in natural history. The successful candidates then study for four months, at Netley Hospital, hygiene, military medicine, and surgery, and pathology most exhaustively. During this time he is allowed 5s. a-day and quarters.

Candidates who come next to the successful ones are offered places in the Gold Coast service, but the dangers of the climate deter many. For every year served there, a year at home is allowed, all the time counting for promotion.

When the competitive system was established, the service required great numbers of officers, and it was not difficult to obtain places. But now competition will become more keen, and it behoves students to work earnestly from the beginning. In this way medical education has been most beneficially stimulated.

Previous to promotion, an examination in all practical branches of his profession must be passed by the assistant-surgeon, an arrangement which has done much good, and induced officers to keep pace with the progress of medical science. If, however, the obtaining by examination the Fellowship of his College of Surgeons or a University degree, titles which are added in the army list, were deemed equivalent, the same object would be attained, and the professional rank of the

officers likewise raised. The required statistical and topographical report should, of course, be submitted to the director-general. The service at present includes 1 director-general, 3 inspectors-general, 31 deputy-inspectors-general, 97 surgeon-majors, and 261 surgeons.

The number of assistant-surgeons is at present 697. The rate of promotions for the ten years ending 1866 was not more than 22, and the death and retirement vacancies 10. From these data an assistant-surgeon could not count on promotion till he had served over twenty years, and has become entitled to a surgeon-majority. At this time the retiring allowance is 12s. a-day, or if invalided permanently, 16s. 6d. It is hard, indeed, to be kept in a subordinate position so long, even if some increased pay be allowed, for a man of mature age and experience has no right to be merely the assistant of seniors who, in many instances, may render the service most intolerable. Among all the grades 89 promotions occurred in 1867—namely, 4 inspectors-general, 19 deputy-inspectors, and 66 surgeons. In the Indian service promotion is obtained necessarily after twelve years' service, if two of them have been passed in charge of a native regiment. A similar rule may, in all justice, be demanded for the home service.

With regard to rank and precedence, the following order has just been issued: "Medical officers are for the future to be exempted from serving as members of all boards except medical boards. Should a medical opinion be required by a military board, reference must be made to the medical officer, who will furnish his report in writing, or give evidence in person if thought necessary. Medical officers having the relative rank of field-officer are to provide themselves with chargers and horse-furniture, and to appear mounted when required to attend parades. On official occasions when guests

are invited to a mess in the name of the officers of a regiment, the senior combatant officer must always preside, and no second place is to be recognised."

Despite of all regulations the medical officer will not meet with respect unless he be a refined and educated gentleman.

The Abyssinian expedition is about to try the medical organization of the army, and it is earnestly to be hoped that it will be found improved since the Crimean campaign.

The service of the Honorable East India Company was for many years the height of the student's ambition; and to its great credit be it recorded, it was the first to open its appointments to fair and open competition. Its officers numbered 885 on active service and 336 retired—1,221 in all, when it was about to be placed under direct control of the War-office. From the admirable conduct of the examination, and the value of an appointment by extra allowances and literary and scientific offices, the Indian service will be always esteemed a most desirable prize. The position Ireland has acquired in the competitive trials she need not be ashamed of. Her sons have been awarded some first and very many high places in the army and India examinations.

The militia is another service which offers a great number of appointments to medical men. It is but an uncertain employment, however, and is at present only under payment when called out. In England there are 171 surgeoncies and assistant-surgeoncies—also 45 in the yeomanry; in Ireland 76, and in Scotland 27 similar appointments—499 in all.

There are several hundred surgeoncies and assistant-surgeoncies in the English and Scotch volunteer corps, but they are all honorary appointments.

The naval service offers honorable employment for those to whom this form of life is suited. The assistant

surgeon formerly suffered great inconvenience from the want of recognition of his proper position, and the denial of fit apartments, and great injustice from the inferiority of pay. These wrongs have been gradually relieved, and the naval surgeon may chiefly thank the manly exertions of students in medicine who nobly advocated his rights. Even the poorest of them refused to be subsidised, according to an absurd proposal last year, to bear the expense of their education if they bound themselves to serve in the navy. There are at present in the service 237 assistant surgeons against 272 and 251 in January, 1866 and 1867—186 surgeons and 85 staff-surgeons on the active list. To compete for the naval service the candidate must submit proofs of 1, age (over 20 and under 28); 2, character; 3, health; 4, medical and surgical qualification; 5, having performed operations on the dead body. Certificate of all lectures must be also obtained, which gives much trouble to candidates and lecturers, and is quite unnecessary. On passing, he is usually sent to Haslar or Plymouth Hospital. The candidates of the year who pass the best, second best, and third best examinations, will be promoted after five, six, and seven years service respectively. Before promotion, a second examination must be passed before the Naval Medical Board, and officers encouraged to take a higher rank in their profession, such as a university degree or fellowship, by being granted some months leave for the purpose. The extra allowances and prize money, and the greater opportunity for economy than in the army, make the navy a favourite with some young men.

In the United States, naval medical officers complain much of exclusion from the cabin mess, and it appears that their share of prize-money is not very equitable. A fair recompense is given also by many of the lines of vessels which sail from Liverpool, London, and Southampton to their surgeons, but the want of retiring allow-

ances induce many of them to leave the service after a few years. Passengers' vessels should invariably carry surgeons; but in trading ships, for the care of the crew, some knowledge of medicine should be possessed by the mate, and made part of his examination before promotion. The increasing importance of England's vast colonies, too, has created many opportunities for the man of rectitude, talent, and perseverance. So great then is the diffusion of British medicine, that the responsibility of the teacher of medicine and surgery is proportionally great. This, the great Dr. Graves confesses: "The British teacher of practical medicine exercises an influence without parallel in importance and extent, and his opportunities in benefiting or injuring his fellow-men are incalculably great. If he neglect his duty, if he teach erroneously, his negligence and his errors in practice are multiplied indefinitely by means of those whom he ought to have better instructed; the scene of his guilt, for it deserves no better name, becomes fearfully enlarged, for there is no country so remote that it may not contribute victims to the incapacity of his pupils. But, on the contrary, if he works with zeal and diligence, if he labours conscientiously and perseveringly in performing the important task he has undertaken, a compensation awaits him, to which a member of scarcely any other profession can attain. The hero and the despot may extend a sovereignty over distant regions, may exert an unlimited control over millions of vassals; they may, like Alexander, grieve at the narrow limits of a conquered world and sigh for other scenes of glory. But they cannot chase away pain—they cannot bid the burning thirst to cease, or give back repose to the sleepless; they cannot impart feeling or motion to the paralysed, or sight to the blind; and, above all, they cannot imitate that almost God-like function of the healing art, by which man is enabled to recall to his fellow-man reason long banished, and restore to society the hapless victim of insanity."

STATE MEDICINE.

now proceed to discuss these important functions
dical men which may be best described under the
of state medicine.

dical Officers of Health are appointed under the
s Act (10 and 11 Vic. cap. 34), and in Ireland
two towns have availed themselves of the power—
ly, Dublin and Derry. In England there are 92
officers in the provinces, and 48 in the metropolitan
icts, under a special Act passed in 1856. The areas
populations in the provinces vary absurdly—namely,
Liverpool, with half-a-million, to a town of 214
ple. The salaries range from £1,000, in Liverpool
ctice being resigned), to *nil* in many. Surely the
lifications, duties, tenure, and salary of these officers
ht to be defined. The duties are, to report on the
urrence of infectious disease—information being ob-
ned by co-operation with the death registrars and
istrars of fever hospitals, and the measures for their
pression which the inspectors of nuisances carry
t; to certify to, and give evidence upon the chemical
d other nuisances which arise, and to advise the local
thority on the best means of ventilating public build-
gs, preventing injury to health from special trades,
id such subjects connected with public health. Where
o city analyst exists, the examination of adulterated
od, water, and gas, also form part of his functions.

In Ireland, where the system of curative medicine is
nost admirable, that of preventive medicine is very badly
organised. Thus, there is no central body for regulating
ealth inspection, or the duties of these officers; and
the Sanitary Acts—extended to us after having been
enjoyed by England for seventeen years—although com-
prehensive, are arranged at random. The Poor Law
Commission directs the local authorities—that is, the
Guardians of rural districts. It is to be regretted that

medical men find so few places on these boards. In England there is a special department of the Privy Council to control public health, with so able a sanitarian as Lord Robert Montagu at the head of it during the present ministry. There are a medical officer, several medical assistants and inspectors under the allied body, the local government office. The fullest investigations are by this admirable machinery conducted in places of which complaints are made, or where the death returns appear excessive, and the annual blue-book is invaluable. In Scotland, by the Public Health Act of last session, the Board of Supervision of the Poor may appoint inspecting medical commissioners, and direct the local authorities to appoint medical officers—powers which they have already exercised. In a forcible appeal for the extension of sanitary reform, the Rev. Charles Kingsley says, "Why a permanent staff of government sanitary inspectors should not be appointed it is difficult to say. We have now factory inspectors, mine inspectors, school inspectors, and they all work well. Not an argument can be brought against the institution of sanitary inspectors which was not brought against them."

We will next contrast the registration systems of England, Ireland, and Scotland, for in each division of the *United* Kingdom they are different. In England a penalty of £10 is inflicted on undertakers, clergymen, or others concerned in burial of a body without the cause of death being certified by either medical attendant or coroner. This insures aid to sick persons, "as there is such bother about the registry," which might otherwise be neglected. In Ireland there is no such penalty, and this may account for the admittedly imperfect returns of deaths. In the returns from provincial towns, published by the Registrar-General, the rural districts should be excluded: in these returns the deaths appear some weeks to be two or three times greater than in others, while it is impossible that diseases can fluctuate

vastly. Dublin people, in the third week of July, 867, were much alarmed by the registry of thirteen ses of cholera which had died in an hospital during the evious October. Justice O'Hagan, some two years ago, n the authority of the registration department, stated at over one-third of the deaths were not recorded; and ne Irish Registrar-General, in his last report, returns ght districts as being under 10 per cent. per annum, r about half the inevitable death rate. Even in England rough neglect of the non-medical registrars, 17 per cent. f the deaths are not certified as to cause of death, and auses are often assigned of which the practitioner who igns the certificate has no knowledge. Thus, in a popu- ous town in England the chief practitioner, who bears the ignity of J.P., employs as an assistant a person whom bout two years ago he hired as his groom, and who has never been since out of this town, to attend medical ectures. This assistant attends all the poorer patients, nd the practitioner signs the certificates of causes of leath of persons whom neither he nor any qualified prac- titioner has seen. Another case was lately exposed, in which a practitioner left, during a three weeks' absence, signed tickets to be filled in by an unqualified person. The certificate of death has for such reasons no weight, and neither the Chancellor nor the Bank of England will receive it. The certificate of the cause of death should be sent direct to the Registrar, as it may be destroyed if it reveals any unpleasant fact, and the medical attendant may be dismissed for his candour.

The Registrars in Ireland are all medical men; in England they are not, and such ludicrous causes of death as "stricture of the windpipe," "worn-out stomach," and "hives," have been returned by them. They also often omit important medical remarks made by the physicians in certifying a death. The superintendent registrars in both countries are non-medical. Their places should be taken by the medical supervisors just

now to be proposed, who in this particular would be similar to those valuable officers, the "Medicins des Morts" in Paris. Even in China such a system has been established. In Scotland the registration machinery is very similar to that of England, but the Registrar-General adopts a different nomenclature. There is now every hope that the registration nosology will be assimilated and improved, as a conference has been held at the College of Physicians.

The present medical certificate, which, though not a compulsory document, practitioners desire to fill for statistical ends, has to be signed without fee, and testifies to a fact which the medical man has rarely positive knowledge of—namely, the time of death of the patient. Instances have occurred in Dublin in which certificates of death were obtained from medical attendants in apparently hopeless cases, for the purpose of obtaining burial money and policies, when the individuals were afterwards proved to be living. Certificates should only be given "*super visum corporis*," and for false returns the medical man might be held accountable. There is no space for the previous residence of those who die in public institutions, nor for the employment, and thus important sanitary and statistical data are omitted, and in the Irish certificate there is no note taken of the preceding disease, or of the number of attacks of paralysis or rheumatic fever for instance, where such data may be valuable. The registration of the birth of still-born children seems desirable in view of the increasing crimes of infanticide and concealment of birth. The English Registrar-General sends some most valuable instructions for the registration of deaths and noting of cases to medical practitioners gratuitously, but warns unqualified men not to use them.

Dr. Farr has proposed for England a district registration officer, to whom he would assign a variety of offices, and to avoid confusion, I would suggest the

me of County Medical Supervisor. He should be pointed by some central department, or by two or ree of the local authorities of districts—that is, Town uncils or Boards of Guardians conjointly. Registra-n of diseases, at least those that are preventible, is lowed to be most desirable, but is at present not tempted. The proposed officers might without diffi-lty undertake it. They might likewise act as census icers, and these returns might be made triennially, as th ten year intervals, in this land of emigration, the esent returns are useless. They would also be ren-red accurate. According to the census of 1851 there is no case of chorea, and only four of scalds among eland's six and a-half millions.

CORONERS.

In England and Ireland county coroners are elected by e parliamentary voters, a mode which was adopted hen the office was as dignified as that of sheriff. The penses of contested elections often exceed the value of any year's receipts. The choice of officers of justice ould never be made in such a way, as the degraded ate of the office of judge in the United States proves. boroughs the town council appoint the coroners, id in Scotland the analogous officer, or procurator-scal, is usually a skilled solicitor. The medical and gal journals often join issue as to the respective eligi-lity of their clients for this position, but if the sanitary fice which I advocate were established, many or all of ie present medical coroners would be suitable r these appointments, and coronerships might be olished, the judicial duties being discharged by the ipendiary magistrates, constabulary officers, or per-aps sessional crown solicitors.

The imperfect investigations conducted in coroners' urts have been exposed by Professor Taylor, and the llowing instance occurred in the county Roscommon a

few years ago. The neighbours were summoned by the wife and sister-in-law of a farmer to view his dead body, the throat being cut and a bloody razor placed alongside. At the inquest no medical evidence was required, and "suicide" was the verdict. A month after, the servant girl swore that while the man was asleep, the wife and her sister had smothered him with a bed, and had inflicted the wound on the dead body. On exhumation the wound was found to be very slight—no large vessel having been divided. The women were convicted and executed, having on the scaffold confessed to the murder. If the servant maid had remained silent, the heinous crime would never have been suspected. The expense of evidence, and of *post mortem* examinations, often cause them to be dispensed with. It is optional with coroners to hold inquests or not, the profitable number being often a weighty consideration with them, and there is no authority in the State to which they are responsible, and hence many of the glaring defects of the system. Very incompetent persons are often chosen to give medical evidence on account of friendship or corrupt motives; and it is said by Dr. Rumsey, that in England such difficult and capitally important investigations as the detection of poison are sometimes entrusted to persons quite unskilled in chemistry. It was for such reasons that Dr. Lankester advocated the appointment of special medical assessors, whose duties would be analogous to those performed for fourteen years by the distinguished Vice-President of the Royal College of Surgeons, by consent of the Dublin coroners. The arrangement was most reliable, as the skilled and trained witness readily ascertained the cause of death, and crime could never escape detection. Practitioners who see a few coroner's cases cannot be expected to keep up the necessary scientific and forensic knowledge. The city coroners have lately appointed their respective sons to this office, the "Coroner's Act" (as Ser-

ant Barry has advised) empowering them to do so, as ɜse gentlemen may be held to reside "at or near" y place where inquests are held in Dublin. They ɔh receive the commuted sum of £75 yearly from ɜ Corporation. In all large Scotch towns there is a lice surgeon, and he is required to see every body ıich has met with sudden death—another practitioner ing called in if a *post mortem* is necessary. This seems ɡood arrangement, and works well in the detection crime. In England the coroners are paid a guinea d a half for every case, so that in some districts ɜ office is worth many hundreds yearly; but in Ireland rough coroners are paid this fee for only 86 cases, d county coroners for 67. Sixpence per mile tra- lled to the place is likewise allowed. If the office is be continued, payment by defined salary would be far ɜferable.

Medical evidence upon hygienic, pathological, or ɔhycological questions in law courts is every day ing weight, mainly because witnesses range on both es to debate technicalities or advance opinions which ɜn the judge cannot estimate. If the medical wit- ɜs were a mere relater of facts no error could arise; t, as without hearing the whole evidence, he is often ɜssed for an opinion, no certainty of just conclusion ɔrovided. Again, medical men are retained to prompt ınsel in cross-examination, and assuming the position an advocate, strive to break down their medical bre- en. This proceeding is often rendered ludicrous by misconceptions and mispronunciations of the coun- thus coached up. It must be acknowledged, also, t in cases of railway accident, practitioners will be nd to give certificates and make assertions in the ness-box which can scarcely be said to be founded on ıest conviction. In the Admiralty Court the judge ıided by nautical assessors, and in the same way ɜ chemists and medical jurists, whose only desire

would be the elucidation of the truth, should be employed; and, considering the injustice now perpetrated, expense would be saved. These officers might be specially appointed by the judges in common; or indeed the medical supervisors just now to be proposed might perform these functions. While the assessor would, through the judge, put pertinent questions to the witnesses, he would have to submit himself to examination by the counsel for both sides when he had recorded his opinion in writing. The appointment of assessors has been recommended by the Law Amendment Society, the Social Science Association, the British Medical Association, and some of the most eminent jurisconsults. It is very needful also in actions for malapraxis that independent medical assessors should try the justice of the action. To have uninformed persons decide such cases is against the principle of English liberty that one should be tried by his peers.

Medical witnesses at present will go unpaid if they do not bargain beforehand, and if they refuse evidence they are liable to action if the suit be lost by their default.

Reference to precedents and authorities should be permitted to the assessor, which is often denied at present to the medical skilled witness, on the senseless plea that the author quoted from is not sworn! Medical witnesses may be forced to divulge secrets entrusted to them by patients. In New York there is a statute preventing this: "No person duly authorised to practise physic and surgery shall be allowed to disclose any information he may have acquired in attending any patient in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon."

The 378th clause of the French code likewise declares "that all medical men or midwives who reveal

rets that have been entrusted to them in their professional capacity, shall be punished," &c.

MEDICAL SUPERVISORS.

If it appears from the foregoing that the registration, nitary, and medico-legal functions of the State are perfectly performed, the following proposal for the ncentration of these functions in one officer should be passionately considered by the Government and all se concerned. The following changes would be in first instance needed: 1. Superintendence of registers should be transferred to the new officers, the clerks unions being fitly compensated. 2. The office of oner should be subdivided, its legal function transred to the stipendiary magistracy or constabulary icers, either without juries, as in Scotland, or with m; and those coroners who are medical men would eligible for the new office of Medical Supervisor. In tricts where the coroners were not medical men, ir office might be continued during their lifetime, if Treasury would be unwilling to grant compensation the average emoluments for seven previous years.

There are at present 93 coroners in Ireland, of whom , or less than one-fifth, are medical. In England, of 331 coroners, 63 are medical men, 57 have no fession, and the remainder are attorneys. The new ce may be discussed under the following heads:

1. TERM.—"City or County Medical Supervisor" uld be comprehensive and distinctive, but perhaps the m City or County Physician, a title under which ies somewhat analagous to those about to be proed are fulfilled in America, would be more intelble. The "circuit physician" and "proto-medicus," ler the Austrian government, are analogous.

2. DISTRICT.—As in Ireland 93 coroners are found ficient, a lesser number of medical supervisors would required. One only might be appointed for the large

cities of Dublin (pop. 254,808), Belfast (pop. 123,479), and Cork (pop. 93,389), and for the smaller counties, such as Louth (90,713), and Longford (71,694), and two or three for the largest counties.

3. DUTIES—(*a*). To act as superintendent registrars—that is, to receive and classify the returns from the Registrars of Deaths, Births, and Marriages, and to examine into every death the cause of which was not certified within 48 hours after its occurrence.

(*b*). In case the cause of death was not natural, he should give evidence before the magistrate or constabulary officer who was appointed to discharge the duties heretofore assigned to the coroner. In this way secret murders and deaths of infants and old people by neglect would not escape detection. Under his supervision published returns might be made out more in detail; thus, instead of 7 dispensary death-rates in Dublin, 14 might be made known, or the returns from tenements and dwellings below £10 yearly value, and those from fashionable mansions might be distinguished. Death-returns, combining the mortality in the neighbourhoods of Fitzwilliam-square and in Townsend-street, can give no reliable data for sanitary reform.

(*c*). To act as medical officer of health, the functions of which have been before described, especially making himself familiar with the natural, social, and sanitary characteristics of his district. The visiting of ships near ports, for the purpose of ascertaining the presence of infectious diseases, is usually paid for by a half-guinea fee by local authorities, and a fee of one guinea is charged for signing bills of health for ships leaving the port. In important ports, such as Southampton, he could act with advantage as officer under the quarantine laws, or the Shipping Act, 1867.

(*d*). To act as witnesses at all death-courts, and as assessors to the chairmen at quarter sessions and the judges at assize.

e). To act as burial inspectors. The injurious
:ts of intramural burial became so notorious by the
)rts of the Board of Health in England, that Mr.
inger, the eminent physiologist, and Dr. Holland, a
-known sanitary inquirer, were appointed as inspec-
: under the Home Office, to examine into the state of
ting graveyards and into the suitability of proposed
s for new ones. As a result of their labours, over
00 churchyards which, from their proximity to dwell-
; and water sources, were most pernicious, have been
ied or regulated, and no new ones which were not
antageously placed with regard to access, soil, and pre-
ing winds have been sanctioned. A million and a-half
been spent during the past fifteen years in establishing
r cemeteries. A Scotch Act gives power to any two
mbers of a parochial board, or ten ratepayers, to
and sanitary investigation of any burial ground. In
land many graveyards are within towns, not decently
anged or protected and over-crowded; and some of
m have been shown to pollute neighbouring wells;
no systematic inquiry has taken place, and the
y legal remedy is by application to the Privy Council,
ere medical witnesses may contest—none of those
) are to decide having medical or hygienic know-
ge.

(*f*). To act as factory certifying surgeons. The
:tory Commissioners of 1833 proved that much mor-
.ty, and many diseases and deformities specific to this
d of labour, were owing to want of regulation of these
ablishments. Inspectors (of whom Mr. Baker,
R.C.S., was the most zealous and able) were ap-
nted, and now, although the number of workers
; doubled, peculiar unhealthiness has disappeared.
der Vic. cap. 15, inspectors may appoint certifying
geons who, for a certain fee, shall certify as to the
; and health of persons about to be employed as ope-
ives, and shall inquire into the cause of accidents in
; factories.

The Children's Employment Commission, of which Dr. Grainger was an active member, collected much information to show that many trades, carried on both in workshops and the workers' homes, especially in Ireland, required regulation analogous to that provided by the Factory Acts.

(*g*). RESTRICTIONS.—He should be debarred from private practice, so as never to be the rival of the local practitioner, but his friendly adviser, who would relieve him of many unpleasant duties and responsibilities, without ever taking advantage of the introductions which his public duties would confer. Besides, the constant claims of private practice would call him away from the punctual discharge of his public duties, and if dependent on the favour of patients, it requires much self-denial to take the place of complainant against them in sanitary cases. On the contrary, connexion with the hospital or scientific departments of a medical school of a large city would be useful in keeping him *au courant* with the progress of his science.

(*h*). OTHER EMPLOYMENTS.—He would be probably employed as referee to government and companies' assurances, as being the most highly informed and reliable officer in the district, who would neither injure the company or the insurer by a careless examination. Such frauds as the following would be prevented. "A woman insured in an office two lives, which rapidly fell in. On this happening with a third life, the directors, having some suspicion, demurred. The woman called at the office, and said angrily, 'Do you think I poisoned my own relation?' The manager, looking fixedly at her, said, 'We *know* you did.' In great agitation she left the office, and never appeared there again." His statistical habits would induce him to note cases, which in life assurance is most important, as will be acknowledged by all who have been called into court in these cases.

many "friendly societies" have failed and ruined amilies of working men, and so much of the money spent improvidently, that Mr. Gladstone's Assurand Annuity Act (27 and 28 Vic. cap. 43) was a benefit. The sum must not exceed £100, and fore the fee for medical examination could not be higher than 2s. 6d. The appointment of mediexaminer is made by the Postmaster-General. insurances were made in England in the first year ie Act.

.) EDUCATION.—For all new appointments special full study of hygiene, or the application of the laws atural philosophy, chemistry, physiology (including use of the microscope), pathology (including vital stics), and of mental disease, should be insisted on. to be regretted that these studies are not adopted nedical men generally, as by means of social science rts, parliamentary blue books, and the abstracts em which newspapers publish, the public will be e better informed and more interested in these ects. It may happen that for want of special irements, the most successful practitioner of the ict would not be best fitted for such scientific duties. r a certain date none should be appointed to the e save those who by special education and examinahad proved their aptitude. The Royal College of geons in Ireland anticipated any other institution in United Kingdom by twenty years in the foundation chair of Hygiene.

j.) REMUNERATION.—For reasons which will be apnt from what has been stated, payment by a fixed would be greatly to be preferred. What would ges or chairmen say if it were proposed to pay them ases? The rate of £100 yearly for every 5,000 initants of the district would be reasonable. The bined fees in each case of coroner (one and a-half nea), medical witness (one guinea for evidence, two

guineas for *post mortem*, averaging one and a-half guinea) two guineas per day in court if summoned, and two pence per entry as superintendent registrar, would probably average this rate, so that the sanitary duties, now so neglected, would be performed without cost to the community. When the pauperizing tendency of deaths among the remunerative members of society by preventible disease, and the cost of their interment is calculated, expenses towards checking disease are really economical. Insurance fees and, in cities, hospital or professional duties would considerably increase the emoluments.

These offices would likewise constitute the machinery for the scientific study of epidemics among men and animals. The invaluable observations, as regards the nature and prevention of zymotics which medical men commissioned to study the cattle plague recorded, should have stimulated the government to a liberal encouragement of such investigations. Yet, after having granted many thousands of pounds for the study of the cattle plague, not as many hundreds were apportioned for the investigation of cholera.

If a central government department of health were established, or one for each of the three kingdoms, all those important statistical, topographical, and meteorological facts which concern the well-being of the nation should be collected by it from the medical supervisors and yearly published.

POOR-LAW SERVICE.

I shall now endeavour to exhibit the labours of him who undertakes the care of his poor countrymen, and how these good services are recompensed. In England poor-law officers are appointed by the guardians of each union, and approved of by the board. The guardians cannot assign more than 15,000 acres, or 15,000 people for the superintendence of one officer—a wholesome

ction not in force in Ireland. The qualifications ssary to obtain these appointments are a surgical ma and a medical degree or licence of the Society pothecaries, having been in practice before 1815, or rmy or navy commission. Before this regulation be- law, 550, or one-third of the entire poor-law officers ngland, had no surgical qualification. The remunera- is so small that they are merely accepted as intro- ions to practice, and to keep out a rival. Besides salary fixed by guardians, there is a scale of fees extra services in clause 177 of the Consolidated er. For example—for amputation of leg or opera- for hernia, £5. However, it is oddly arranged if the patient dies within thirty-six hours, the fee is £2 10s. "In any surgical case, not provided for rticle 177, which has presented peculiar difficulty, equired and received long attendance from the dis- t medical officer, the guardians may make to the medical officer such reasonable extra allowance as may think fit and the commissioners may ap- ve." The payment for midwifery cases ranges from . to 20s., or for very difficult cases, to £2. The r-law physician is obliged to supply medicines, to nine pauper lunatics, and to enforce certain sani- regulations under the Nuisance and Disease Pre- tion Act, but for which extra remuneration is granted. contracts vary very widely, from £5 to £150, but average is about £60—a very inadequate recom- se, but the number of paupers is very small, and ate cases in general afford a very considerable amount income. In workhouses, however, the remunera- is most insufficient. In the Bodmin workhouse bad arrangements of which were last month ex- ed) the medical officer is paid £28 17s. for attending supplying with medicine, except cod liver oil, 180 ients on the average in the house. Through the of the established practitioner and the hopes of the

new-comers, such contracts are accepted; but in common honesty they should not be, on either the part of the guardians or the officers. Besides, it is trusting too much to human disinterestedness to leave him the choice of giving medicines, some of which will cost twenty times as much as the others. If the comparison be not offensive, whether would a publican who contracted to supply stimulants, choose whiskey or champagne? We have known practitioners who blamed their assistants for giving such medicines as iodide of potassium, for which no cheaper substitute could be used. The great fault in the Poor Law undoubtedly is the practice of compelling the medical officer to supply medicines. It is objectionable on many manifest grounds, but owing mainly to the untiring exertions of Dr. R. Griffin, the system is likely to be soon abolished. The distribution of medical comforts, including food and stimulants, is allowed in England. The generosity of the English poor-law physicians was exemplified in a striking manner a few years ago. The season happened to be one of unusual distress, and the doctor freely stated his opinion that in most of the cases food and stimulants were the "medicines" needed. The guardians were indignant, and the chairman, one of those self-important personages who feel that the honour of their presence at the board is a discharge in full of all the obligation they owe their tenants and poor fellow-beings, asserted that the doctor was bound, according to his contract, to supply these provisions if they were to be considered "medicines." The noble friend of the poor thereupon took from his pocket butchers' and grocers' bills for goods supplied to his starving patients, the amount of which exceeded his yearly salary. The supplying of medicines and cost of separate dispensary, according to the Irish average, would be about 1s. per case relieved.

By the Metropolitan Poor-Law Act, 1867, the relief

the poor of London in dispensaries and hospitals has en closely assimilated to the Irish system, and the ral districts are likely to be changed after the same cellent model. According to absurd regulations in ne dispensaries supported by voluntary contributions, verpool, for example, the officers are debarred from ivate practice.

In Scotland the poor-law system does not differ essenlly from that of England, save that the rate of recomnse is still lower. The sums paid for medical relief a few of the parishes during the year ending May, 66, may be quoted. Ayr, population 9,305, 01 8s.; Bourtie, population 547, £1 1s.; Dunbog, pulation 207, 4s. 8d.; Inverkeithny, population 0, 10s. Mr. Burt of Edinburgh thus alluded to the vice: "Are they to rear a race of physicians skilled all languages, living and dead, perfect masters of ic and metaphysics, adepts in all the sciences, and ndits in all the ologies, and then invite them to tle down in the remotest districts of our country l its dependencies, achieving by means of all this rning what is poetically called an honest indepenice, which, being translated into the vernacular, means newhat less than £150 per annum, garnished with vulgar vituperation of parochial boards." The circnstances of the profession are little altered since this iest and truthful appeal, for the awards are usually temptible and unequally rated, as the above exples show.

IRISH POOR-LAW SERVICE.

In Ireland up to 1851, the medical relief of the poor s performed under the Act of 1805, by dispensaries h ill-defined boundaries; and in places with a scanty nber of resident gentlemen no dispensary whatever s to be found. In 1836, with a population about onerth greater than that of 1851, there were but 494

dispensaries in Ireland. The funds collected from the surrounding inhabitants, an equal sum being added by the grand jury, failed gradually, and the medical officer, to receive anything like adequate payment for his services, should beg it from the residents. The distance from the dispensary to the remote parts of the district made timely or frequent attendance impossible. For example, in 1836, the county Mayo, containing 2,100 square miles, had but one dispensary. Inspection to insure adequate medical attendance and appliances did not exist. During the disastrous years 1846-50, the income almost entirely failed. The new system, by which the medical charities were wholly placed under Poor Law administration, was objected to by many, and an amendment, proposing that yearly subscriptions should be also received, met with warm support. The Infirmaries Bill of 1854 proposed to confer privileges upon subscribers of twenty guineas to the Union hospitals, into which these institutions were to have been converted. In 1841, the medical charities of Ireland were investigated by Mr. Phelan and Dr. Corr, and the first Act to "extend the practice of vaccination," was put under Poor Law administration. A bill for the regulation of the medical charities was framed, but so powerful was the opposition offered by the medical profession, that it was never brought in.

In 1851, the medical treatment of the poor was placed under the commissioners (one of whom was to be a medical man at a salary of £1,200), and they were given the power of appointing a sufficient number of medical inspectors. The funds under this Act were to be derived wholly from the rates; the guardians were to divide the unions into districts, governed by a committee of *ex-officio* guardians and elected ratepayers. The medical officers of existing dispensaries were continued, and the committees had the election of their successors. The expenditure was estimated at £102,700 for the first year,

iat for 1866 was £116,315, exclusive of £12,892 gistration expenses.

. Rumsey ("State Medicine") objects to the sys- stablished in the place of the voluntary one, mainly ise of its pauperizing tendency. The guardians, in ging the districts, were much influenced by the e of economy, and the commissioners in 1854 re- d that the average population to each district was 0 (a number now reduced to 8,098), the acreage 00, and the average valuation £1,814. Many dis- s had 40,000 acres under the care of one medical- er. By the change the salaries of the officers, which aged, in 1854, £75, were not increased, although idance on the sick was more arduous and the keep- of books much increased.

, now averages £89, and £8 for vaccination for each ie 786 medical officers to whom 716 districts are ted. There also are 163 workhouse physicians, and pothecaries to dispensaries. The construction of the mittee from unintelligent ratepayers, and their very equent meetings, have been often complained of. ny of them in remote parts of the country cannot d or write, and with a majority the sole principle is essen expenditure. Such men are incompetent to ect steps for the prevention and cure of disease.

The most galling complaint of the dispensary physi- n has been the enforced attendance on persons who, ugh clearly not poor, bring tickets from members of committee. He is bound to attend, but at the next eting of the committee, perhaps many weeks distant, ticket may be cancelled. Then the attendance has obably ceased, and due payment cannot be had by gal process. During last year in the 716 districts ly 828 tickets were cancelled. Dispensary officers are ewise often called on to see members of the constabu- y force in sudden cases, if their paid attendant resides a distance, or to give aid to persons who meet with

sudden illness or accidental injuries, or who are drowned. In such cases remuneration is scarcely ever obtained. The midwifery branch of the profession entailed a most harassing amount of duty, but it has been lessened by the appointment of midwives in seventy dispensaries. Dangerous lunatics must be also examined, even in a neighbouring district, "without fee or reward," according to an Act passed last session. It must, however, be allowed that under the old dispensary system abuse of charitable relief existed to an even greater degree.

Payment from the Consolidated Fund, as medical officers of the army and navy are paid, and superannuation, have been often advocated, and very forcibly by that valuable union of the profession, the Irish Medical Association.

The civil service estimates for the year 1867 for the first time contained an item (£59,300) for defraying part of the medical salaries and expenses, and which, by recommendation of the commissioners, will be mainly appropriated to impoverished districts. An Act was obtained in 1866 to superannuate union officers, physicians excepted, as it was averred they did not give their whole time.

A dispensary officer lately resigned after fifty-three years' service in the county Down. It must be acknowledged that his committee appreciated his services, for they presented to him a very flattering testimonial, and appointed his son as his successor. But surely there ought to be some other rule than "do or die" to meet the case of the dispensary officer. By a recent act the ratepayers are relieved from one-half of the medical salaries, and it would be only just that medical officers should be included in the benefits of the Local Officers Superannuation Bill now before parliament. It is unjust to the poor to have an attendant incapacitated by age, and who, from the salary being his main support, cannot resign. The salary is so small that he can make

rovision by saving or insurance for old age or infir-
. Assistant-barristers, who devote some two or
3 weeks yearly for an average stipend of £800, are
rtheless pensioned. They have many friends in
ament; the doctors few. If ultimately refused by
rnment, the officers should allow two and a-half per
. to be deducted from their salaries, so as to make a
)w and orphan fund, as in the constabulary. By far
greatest grievance under which the Irish dispensary
ndant suffers is the inadequacy of his payment. It
as to be forgotten that the impoverished state of the
ıtry affords in many places no private practice, and
therefore his poor-law salary is his whole support—
:etched one when the expenses of horse and servants
deducted. The salary varies from about £60 to £100
annum, and it should be uniformly raised to at
t the latter sum. Mr. Morris, M.P., Galway, has
moved in that union that the minimum salary be
)0, as the large contribution from the Consolidated
ıd fully justifies the increase. In poor and thinly
)ulated districts, as it must be the doctor's whole
)port, the salary ought to be more, and might be cal-
ated by the radius of the district or the number of
ıses under £2 valuation in his district, or both by
npound schedule. If consultants are called in, or if
ıer physicians give help on emergencies like the in-
ıion of epidemics, such services will not be recom-
ısed. That guardians are capable of actually reducing
aries, the case of the Kenmare union some years ago
monstrated. It was comforting to see how warmly the
ınly resistance of the late Dr. M'Carthy to this step
ıs approved of by his professional brethren, many
ındreds of whom subscribed to a testimonial.

The average number of patients in fever hospitals
ily during 1864, 1865, and 1866, were respectively
654, 1,824, and 1,357. The total number of persons
lieved by dispensary attendants last year was 760,797;
which over one-fourth were at their homes.

The rules for the regulation of dispensaries direct that the officers shall be qualified in medicine (by having the degree of a university, licence of a college of physicians, or apothecaries' diploma), in surgery, and midwifery, and that he shall be twenty-three years of age, a restriction which is much complained of, for many candidates, on having passed all the required examinations, are compelled to wait perhaps idly at home for two years if they are anxious to be employed in the service. In the army and navy medical department the age is fixed at twenty-one, as well as in most colleges.

The selection by the committees is too often made on party and sectarian considerations, not on qualifications; and there have been lately instances of such electioneering tactics as increase and decrease of the numbers of the committees just before the poll. In France and in Prussia such officers are appointed by central boards above such despicable motives.

The Poor Law Commissioners have lately decided that they will not sanction as dispensary attendants medical men already holding the office of coroner in rural districts. Whatever may be said of the expediency of this determination, it is very generally felt that it was scarcely just to set aside an appointment which had been made by the committee many weeks before the abovenamed order, but which appointment they had not sanctioned. There are very many coroners in Ireland who are likewise dispensary physicians, and no complaints have been made as to the way in which both duties have been performed. A few months before the commissioners' refusal to sanction the appointment of one of the coroners of Kildare, they had sanctioned the appointment of his colleague to a similar office; and in December they refused to interfere with a dispensary officer who had been elected coroner, six of his committee having addressed them. The calls to perform coroners' duties are not from a greater distance, nor at

all so frequent, as the calls for private practice which a successful practitioner will be required to attend.

It appears from a recent case that a committee may dismiss an officer solely for intemperate language offered to one of them, and that the commissioners will sanction the removal of the officer. In the case alluded to, without any further offence, the officer was also called on to resign a separate office, that of physician to the fever hospital.

The appointment of surgeon to the county infirmaries throughout Ireland was highly prized some years ago, from the superior position it conferred, and from the emoluments it afforded, which, however, have been greatly reduced. The following are some statistical facts relative to them, published in 1857. Number of beds, 1,722; average number of patients received yearly, 18,529; average deaths, 459; total income, £33,366; salaries and wages, £8,326; average expense of each patient, £1 13s. 9d.; average expense of each bed, £18 3s. 9d.; average cost on each acre, 0½d. They have done good service in educating pupils before they come to schools of medicine, and attendance on them is in part recognised by the colleges. Similar institutions exist over other divisions of the empire. The Medical Charities Bill, as originally drawn, sought to absorb the county infirmaries into the poor law system; but this was successfully resisted by the surgeons, who, through the grand juries and county members, were able to make themselves heard in parliament. Many able and disinterested medical men urge against these infirmaries that they frequently receive the servants and dependents of the wealthy subscribers, for whose treatment on their respective estates they should pay. The commissioners were of opinion that artizans, small farmers, and servants might contribute to their own maintenance. By the 25 & 26 Vic., cap. 83, persons suffering from accident or acute disease are ad-

missible into the workhouse infirmaries, and as the county infirmary may be many miles distant, this is an evident advantage.

The fever hospitals of the counties were placed under poor law administration, and all must allow that benefit has followed. Also a few fever hospitals are supported by county funds, the emoluments and regulations of which vary greatly.

The sanitary state of the English workhouses has created during the last year or two intense interest. That most eminent statist, Dr. Guy, said, "It is highly probable that for every life which the poor laws save by averting starvation, a hundred are sacrificed by the imprisonment they inflict." The *Lancet*, by special commissioners, the *Pall Mall Gazette*, and such distinguished members of our profession as Sir T. Watson, Sir J. Clark, Sir W. Ferguson, Mr. Paget, &c., drew attention to the subject. 800 cubic feet was assigned as the least space for each workhouse hospital patient. The Inspector, Dr. Smith, advised that "a re-arrangement of the mode in which the medical officer performs his duty is necessary, with a view to the devotion of more time to them. The medical officers should act more generally as sanitary officers, and their recommendations of every kind should be in writing." With regard to the deficiency of inspection, he reported: "More than one Inspector of the Poor Law Board should be appointed for the district, and after the example of the Lunacy Commissioners, they should have special and different professional qualifications." According to this recommendation the board secured the services of so distinguished a physician as Dr. Markham, but for vacancies which have since occurred they have not recognised the claims of medical men. Dr. Smith has, however, been constituted medical adviser to the board somewhat after the manner of the Irish Medical Commissioner.

LUNATIC ASYLUMS.

In all public lunatic asylums there are at least two medical officers, a resident and a visiting. In some lunatic asylums, as the Richmond, there are three externs. In England there are 65 public asylums and 103 private ones, which engage the time of 195 medical men; 8 of the commissioners of lunacy belong to the profession. In Ireland there are 20 public asylums employing 42 medical officers and 16 apothecaries, and 20 private houses, 17 of them being directed by medical men. The two Inspectors-General are medical men. In Scotland there are 18 public hospitals, 18 poor-houses for pauper lunatics, and 9 licensed houses, 44 medical men being connected with them, including 8 commissioners. In the three kingdoms there are therefore 261 of the profession directly concerned in the treatment of insanity, and it is surprising that so little attention is paid to the subject in the schools. In Ireland no lectureship on the subject exists, but a few pupils attend some of the public asylums. The government have very properly announced that they will require from resident superintendents proofs of special knowledge of the treatment of mental disease. The number of inmates range from 740 in the Richmond to 180 in the Carlow; in the larger ones an assistant resident physician is much needed. The desirability of placing the management of lunatics wholly in the hands of public officers has been lately advocated by a high legal authority, mainly on the grounds that the average of recoveries is greater in public than in private asylums. But it must be remembered that the latter get a much more incurable class of cases—namely, patients whose higher mental training make mental malady proportionately more incurable, and the richer classes will usually keep and care at home the slighter cases, thus making the run of cases in private asylums more grave.

THE GENERAL PRACTITIONER.

In Ireland, the general practitioner, after the model of the English one, scarcely exists. In Dublin, indeed, there are gentlemen who, besides keeping open compounding establishments, visit and supply the medicines; but through the country, practitioners do not sell medicine by retail. Few practising assistants are therefore required, and they are always qualified. The assistants of apothecaries are, however, frequently unqualified, which is much to be regretted. The custom of charging separately for the visit and the medicines supplied is peculiar to England. The most faithful description of that branch of our profession is to be found in Tom Taylor's inimitable play, "An Unequal Match." On the stage the doctor is usually sketched as the solemn, silly, and pedantic nostrum vendor. It would be hard indeed to satirize the high-minded disciple of the most noble of sciences. Indubitably this practice has retarded the profession of scientific medicine, and lowered medical men in public estimation more than any other cause. The great benefit of the Medical Act was to abolish the monopoly of the apothecaries under the Act of 1815, and to permit the compounding of drugs by the registered practitioners by whom they were prescribed; but it is most deeply to be regretted that the practice of charging separately for medicines was not suppressed.

The drawing up of a tariff of fees in general practice is very desirable, not that it should be enforced in every case, which would be to commercialise our profession, but that it should afford a standard for the guidance of the public and junior practitioners. It should be graduated into, at least, two or three scales according to circumstances of the district or town; and the house rental of the family, as suggested at Sydenham, is the least objectionable test. With the exceptions of accouch-

ments, important surgical operations, and night visits, no "job" charges should be named, but a fair sum should be received for each visit and the medicine supplied. The year just passed having been one of great commercial difficulty has been less profitable than usual to practitioners. If the system of general practitioners were established in Irish towns, the fees to persons of rental under £25 might fairly be 5s., and 10s. to those whose rental exceeded that. In rural districts an additional fee might be charged for every three miles travelled to the patient's house. In the case of fees for attending benefit societies among the humbler people, a large meeting of the profession of Birmingham lately resolved that 5s. per head per annum should be the lowest charge. Payment in proportion to the number of visits would be a better plan, and a certain number might be given for a subscription, all others to be paid for. The consultant's fee should be either one or two guineas according to his standing, with a proportional increase according to distances. It should be of course paid at once after the visit, for as the feelings of a sick man and a cured one are so different, the rule *accipe dum dolet* should never be forgotten. The maxim in ancient Rome was exceeded, so that the Emperor Valentinian decreed that no arrangement as to fees should be made while the person was ill. Quacks of the present day extort from the fears of the patient, as well as by threats of exposure, immense sums. The time and attention needed for a consultation have always been regarded as justly rewarded by a fee double that for the ordinary visit.

The position of a medical assistant is of a much more confidential nature, and one in which the interests of the principal can more easily suffer than that of the assistant of other professional or commercial men. The public do not appreciate degrees of qualification, and they will take fancies to assistants and transfer their

patronage to them if they separate from their employers unless there be legal ties to prevent it. Carelessness in compounding, or disreputable conduct on the part of an assistant, will severely injure the practitioner, who is responsible for his skill and conduct.

In cities the pure physician or surgeon does not require assistants, and as the chemist encroaches so much on the business of the general practitioner, the latter is forced to keep a retail shop, and his assistants will therefore require to study more carefully the prices in the monthly drug-list than the writings of Watson, Fergusson, Quain, or Beale.

It is the general practitioner attending poor-law and club patients in the rural districts who requires assistants for compounding, book-keeping, and attendance in the surgery while he is absent. Such assistants would be best qualified by the Apothecaries' or Pharmaceutical Societies, but no visiting assistant should ever be engaged unless he possesses a surgical diploma. The present demand may be judged of by an advertisement a few days ago from a medical agent, "To assistants; wanted twelve qualified, and twenty unqualified." Dispensing assistants are becoming less useful, as now they are seldom apprenticed, but often handle drugs for the first time when engaged, their time having been up to that spent in the lecture room or hospital wards. We would not wish to see the apprentice of fifty years ago revived, whose duties included the sweeping of the surgery, lighting the fire, and assisting the groom; but to a certainty the apprenticeship system reared a more useful class of assistants. The most junior assistant is usually a lad whose parents wish to test his liking for the profession (and it must be confessed they try no very encouraging process), or one whose prospects are not bright, and who, in exchange for board, gives his services. Yet in this position, as well as in others of much greater difficulty, the lad who resolves to succeed will

do so, and will make every drug and every living thing around subserve for the increase of his knowledge.

Very few Englishmen with qualifications seek assistantships, for having usually command of money they are able to buy a practice at once; but as the experience gained as an assistant is most valuable in deciding on and afterwards conducting a practice, the habit is unwise. Many of the assistants who seek places are therefore Irish and Scotch, and as they have not compounded, or at best only done so in hospital, they are not at once available for such duties. It must be confessed also that gentlemen from these parts of the United Kingdom are not looked on with as much consideration as Englishmen. They often think that they are to attend the patients, not inquiring who is to do the drudgery in the surgery.

As to the legal relations of practitioner and assistant, they are controlled by the law of master and servant in almost every point. There are usually agreements that the assistant shall not practise on his own account within ten miles of his late employer's place for ten years—much greater distances or periods would be held in courts of law to be "restraints of trade." Immediate dismissal can be enforced for incompetency or improper conduct.

Mr. Langley, from whose "Via Medica" much of the information on the previous page is derived, shows that an assistant cannot force his employer to give him a testimonial (but surely no reasonable man would refuse to do so if the duties had been satisfactorily performed), and a master can be held responsible for any mistakes which his late assistant makes if another employer engage him on the faith of a testimonial which can be shown to be fallacious.

The rate of remuneration for a qualified assistant is, in addition to board, about £60 a year, which may be gradually increased as the services become valuable.

Cases occasionally occur in which an assistant is taken into partnership, or succeeds to the practice by the death of his employer—a yearly consideration being usually agreed on for the surviving relatives.

Mr. Langley describes the duties of the "dispensing assistant" as follows: "At the commencement of the day the cleanliness and order of the surgery should be looked to, and the servant or office lad should be employed to rectify any neglect. A plentiful supply of clean water, proper cloths, and towels should be at hand; the counter should be studiously clean, and the assistant should see that folding papers of various sizes required have been cut and put into the drawer where they are usually kept. From time to time also he should see that there is a supply of labels, pens and ink, blotting paper, bottles of various sizes, boxes for pills and ointments, pills in mass or rolled, tinctures, essences and drugs generally. It is a good plan to look into stock once a week, say on a Monday morning." His duties also include keeping the books, "posting" them, and periodically making out the bills—a good, neat hand being indispensable. The profession has been often accused of writing illegibly; and, still worse, it is said the habit was imitated from the practice of the physicians of the seventeenth century, who wrote their prescriptions in taverns when their hands were by no means steady.

The number of visits a practitioner in England will daily pay may be judged of by the fact that the lowest number for which Smith's "Visiting List" is issued is twenty-five. This publication is invaluable as a record of business and memorandum book.

Professorships in scientific and medical schools, and hospital appointments, which attract many to the profession, will be hereafter discussed; and as we have now discussed the other employments which medical men may aspire to, the subject of pharmacy next claims attention.

PHARMACY.

Until James I., in the thirteenth year of his reign, granted a charter separating the "grocers" and "poticaries," these two arts were carried on by the same person, and indeed a charter, given in the fourth year of his reign, had consolidated the employments. During the plague in London the apothecaries earned national gratitude by remaining to minister to the dying poor when physicians (not exclusive of Sydenham, it must be regretfully acknowledged) had fled.

The Society of Apothecaries, by dint of parliamentary agitation, which arose out of an attempt by the then Chancellor of the Exchequer to tax their bottles, and during an almost lethargic condition of other bodies, obtained in 1815 the right of examining in medicine and its collateral subjects; and thus the sole power of licensing general practitioners was vested in that trading company until the Medical Act, 1858, was passed. In Scotland an Apothecaries Company was never established, the College of Surgeons having had the power of licensing for the compounding of medicines. The Colleges of Surgeons and Physicians of London, however, at length awakened, and the Pharmaceutical Society meanwhile acquired the right of educating and licensing dispensing chemists, so that it was difficult to predict what would be the future of the Apothecaries Company when the Medical Act passed. The yearly lessening of its licentiates may help one to form an opinion. The Apothecaries Act, 1815, appointed searchers of shops who might destroy improper medicines, and twelve examiners to license apothecaries. Examiners might be also appointed in counties to license assistants. Any unlicensed person acting as apothecary was liable to £20 penalty, or as assistant, to £5, and could not recover charges. It does not appear that the company devoted much zeal to pharmaceutical che-

mistry, for the Master confessed, some years ago, before a parliamentary committee, that he had not attended to practical chemistry, not considering it part of his duty. The following instance, given by Mr. Carmichael, shows that in English towns the apothecary keeps in fact an assorted warehouse:

"The following placard is copied, verbatim, from a board which the author saw suspended, during the summer of 1839, at the window of an apothecary's shop in Manchester. Such notifications exhibit so extraordinary a melange as to excite the astonishment and ridicule of foreigners, but are so common in Great Britain that their incongruity passes unheeded by all classes of Englishmen: 'A. B., Surgeon and Apothecary. Prescriptions and family medicines accurately compounded. Teeth extracted at one shilling each. Women attended in labour at 2s. 6d. each. Patent medicines and perfumery. Best London pickles. Fish sauces. Bear's grease. Soda water. Ginger beer. Lemonade. Congreve matches, and Warren's blacking.' I inquired of the proprietor of this heterogeneous mass if he really was, as his placard announced, a surgeon and apothecary? He candidly acknowledged that he had no right to call himself a surgeon, but stated that he was a licentiate of the Apothecaries' Company of London, and therefore *legally qualified to practise medicine!*"

The Pharmaceutical Society was established in 1841, and chartered in 1843. All persons who desire to be admitted must pass examinations in chemistry, pharmacy, materia medica, and botany, as well as giving practical evidence of skill in dispensing. The Pharmacy Act makes it penal for any one to assume the title of pharmaceutical chemist without being a member of this society, but it ought to be amended so as to prevent compounding in any way without this qualification.

There are Boards of Examiners in London and

Edinburgh. Apprentices must answer in Latin, English, and arithmetic, and pay a fee of £2 2s. There are 586 apprentices now on the roll. The next examination confers the privileges of an assistant, the fee being £3 3s., and both apprentices and assistants pay an annual fee of 10s. 6d., for which they receive the journal and may attend the lectures for half fees. There are 393 assistants at present enrolled. On passing the "major examination," they become members of the society, but are required to subscribe one guinea yearly, which, along with voluntary contributions, supports a large benevolent fund. The fee for the examination is £5 5s. By the Act the examinations are not to include medicine, surgery, or midwifery, and no medical practitioner can be registered as pharmaceutical chemist. There are 417 members in London, 1,551 in the provinces and Scotland, and 42 abroad—2,010 altogether; or, with assistants and apprentices, 2,989 persons engaged in pharmacy, who have been examined and found qualified in the knowledge of the art.

There are several prizes and endowments, and the examination papers are most admirably drawn up. As an example, that in chemistry and pharmacy, given last July by Professor Redwood, may be quoted:

"1. What is the weight of a fluid ounce of pure ether? Describe minutely the way in which you would determine the specific gravity of this fluid, pointing out sources of error that might affect the result if the temperature of the atmosphere be much above that at which the determination is to be made. 2. What is the meaning of the expression 'mechanical equivalent of heat?' 3. What are the latent heats of water and of steam, the latter being under the ordinary pressure of the atmosphere? 4. What are the best excipients for giving a pilular consistence to each of the following medicines—namely, calomel, camphor, creasote, copaiba, oil of peppermint, mercurial ointment? 5. De-

scribe the Pharmacopœia process for the preparation of acidum nitro-hydrochloricum dilutum; explain the reactions which occur, and point out the difference between the present process and that given in the Pharmacopœia of 1864. 6. Give the symbolic formulæ for acidum citricum, acidum tartaricum, alumen, ammoniæ carbonas, antimonium tartaratum, chloroformum, hydrargyri perchloridum, and hydrargyri subchloridum; representing them according to the two systems of notation adopted in the Pharmacopœia. 7. Describe the principal manufacturing process in the production of carbonate of soda, and the Pharmacopœia process for bicarbonate of soda. 8. How is glycerine obtained? What is its composition, and in what way is it related to alcohol?"

The society owes much to its first president, William Allen, F.R.S., the worthy colleague of Sir Humphrey Davy. Altogether the regulations of this society seem admirably devised to supply the public with intelligent and accurate dispensers, and they are gradually succeeding to the place of the apothecaries. The membership of the society is necessary for admission as dispenser into the army service. Among their privileges may be mentioned exemption from serving on any jury, as is the case with medical men likewise.

A committee of the American Medical Association lately considered the polity of establishing a school and licensing body for pharmaceutical chemists in every one of the States, for without legislative distinctions the employments of the practitioner and the pharmacien cannot be regulated. In Philadelphia the apothecaries have been proved to advertise prescriptions of physicians sent to them, and to prescribe themselves; while they degrade even the medicine trade by the sale of stationery, confectionery, and intoxicating liquors.

The Irish Apothecaries' Company, established by 31 George III., cap. 34, is, besides a licensing body, a

company trading in drugs, the directors being shareholders and examiners of future customers in pharmacy, medicine, surgery, anatomy, &c. Although they examine in these subjects none have ever held the position of teacher in them. From the very preamble of the Act it appears that a distinction was intended to be made between the seller of drugs and the prescriber. It states that many frauds "have been imposed and practised on many of his Majesty's subjects, to the injury of the *fair trader*, the disappointment of the *physician*, the imminent hazard of the lives of his Majesty's faithful and loyal subjects throughout the realm." The first meetings of the company were held in the buildings of the College of Surgeons, then in Mercer-street. After some litigation and much debate in the Medical Council the licence was decided, by 13 to 8, to be a medical qualification, to be registered under the Act of 1858, the right of compounding prescriptions being still monopolized. The registry of the apothecaries' licence as a qualification in medicine was discussed in the Medical Council for years, at first rejected, but by perseverance carried, the distinguished representative for two Scotch universities being its never-failing advocate. The apprenticeship formerly for seven years has been almost abolished, as any one producing a certificate of having been engaged for three years in practical pharmacy is eligible. This is a positive improvement, as in a year or two compounding may be learned, and other branches of medicine cannot be studied behind a counter. The number of apothecaries is rapidly diminishing in Dublin—in 1848 there were 120, now not half that number, and nearly all the compounding is done by a few large establishments. Apprenticeship for years to an apothecary was a few years ago the mode of studying the medical profession most popular. This fallacy may be judged of by the following example. A widow lady being able, with extreme self-denial, to save a sum sufficient for

educating her son as a medical man, was urged by a mutual acquaintance and self-styled disinterested friend to give it all to an apothecary in a town of some 9,000 inhabitants. The lad was to do the shop trade for seven years without salary. As he was not quite fifteen he could not pass the necessary examination. He meanwhile met with an honest adviser, and three years before his drug-selling unpaid slavery would have expired, he was earning £300 a-year as an anatomical teacher in Dublin.

In Dublin, medicines are freely sold by druggists, the dose being usually printed on the label; but in small towns, shopkeepers wholly ignorant of the nature of drugs, and who frequently cannot read, retail laudanum, tinctures of rhubarb, or senna, or black draughts, and may just as readily supply any one as the others. Many sad instances of this are related by Professor A. S. Taylor in his report to the Privy Council in 1868. The Rev. Dr. Alexander, a few years ago, was poisoned by arsenic supplied by a shopkeeper in Ferbane instead of arrow-root. In another of this man's drawers were found, loosely papered, rice, corrosive sublimate, jalap, and oxalic acid; all were under the care of an ignorant boy. In another instance, twelve pounds of arsenic was sold by a druggist in mistake for plaster-of-Paris to a cheap confectioner, who having next day retailed it in the form of lozenges, about 200 persons in the town of Bradford were poisoned. For criminal purposes strychnia and other fearful poisons can, owing to a want of legal restrictions, be obtained by any person who alleges as their purpose the destruction of vermin. About 550 deaths occur annually in England by poison.

The remedial measures clearly are, that none but skilled pharmaciens shall retail those dangerous agents, and then only to known persons and for purposes ascertained. The keeping apart of poisonous drugs and their distinction by peculiarly shaped bottles, or with labels edged with sand paper so that they could be recognised

in the dark is important. The sale of patent medicines has done so much harm that the government before affixing its stamp should insist that their composition should be made known to the sellers and the buyers if they required. In the case of other patents the plans are testified to.

From what has been stated in this and preceding sections, it will appear that there should be two grades in the profession, viz., the physician and surgeon who does not supply medicines to his patients, and the general practitioner who does. The profits of pharmacy should be entirely enjoyed by the dispenser, who should compound the prescriptions of the first grade, and have the sole power of retailing drugs or at least those that are poisonous. The dispensers or pharmaciens, while protected most rigorously in their own legitimate function, should be most strictly prohibited from abrogating the duties of the other classes, for which they could not be by education or otherwise at all qualified. The circumstances of the profession in Ireland, it has been shown, are not precisely similar to those in England, as besides the physician and surgeon (between whom less distinction is made than in England) there are the apothecaries, who besides practising physic, surgery, and midwifery, supply medicines to their own patients, compound the prescriptions, and act under the direction of the physcician and surgeon, and in addition sell medicines and medical appliances to all comers. Any calm and unprejudiced person would declare that no individual should pursue the heterogeneous duties which the Irish apothecary exercises for the following reasons—1st. The sale and compounding of medicines should engross the dispenser's whole time and attention. Now, as the duties of physic, surgery, and midwifery are exercised more out-of-doors than at home, the establishment must be left to assistants and apprentices. Of the dangers of this practice many examples might be

quoted, and the nearly fatal mistake of sending extract of belladonna, instead of Plummer's pill, to the late Dr. Flood, will be long remembered by the profession. 2nd. The practice of charging for medicines he himself orders, offers temptation to the dishonest (who disgrace every profession, and from which the pharmaceutical cannot be free) to give inordinate quantities, or even such as may protract recovery. However, the public has come to like the drugging system, and phials will be objected to if not filled, and draughts unless they scour four or five times, value for the money being looked for. The doctor-apothecary will always select as consultant one who reciprocates by ordering medicines plentifully; and all must have heard of the Dublin apothecary who vowed he would never call in a physician who for each visit did not at least "put a leg of mutton in his pot." Many of the Dublin general practitioners now send in at the end of the year a bill for a certain sum, not specifying medicines in detail. A practitioner who both prescribes and supplies medicines may overdose, and there is no one to prevent or discover the mistake; on the contrary, the supervision of the physician's prescription by the dispenser affords a most wholesome check, and thoroughly secures public safety. 3rd. It tends to deteriorate the science of pharmaceutical chemistry, than which none of greater importance to the human race exists. It is manifest that if engaged in utterly extraneous pursuits, the apothecary can find no time to investigate the properties, combinations, and preparation of medicines. 4th. The training which the apothecary (who has no other qualification) undergoes in fulfilling the curriculum prescribed, and passing the examination, is insufficient for one who is to treat disease in all its intricate forms, and in this way the practice brings discredit on medicine, and is likewise full of danger to the public. Up to 1827 a certificate of having learned pharmaceutical chemistry (which was taught in the laboratory, Mary-street) and

apprenticeship were the only qualifications, but they have gradually been increased. Prof. Macartney remarked that the proper business of the apothecary has as little to do with the practice of medicine as that of the instrument-maker with operative surgery. If such be the symptoms of a very morbid state of things, the following remedy seems called for; but it must be acknowledged that it has been again and again prescribed without, however, being administered. Pharmaciens should be incorporated by a general act as a Royal College of Pharmacy in London, Dublin, and Edinburgh, and endowed with the greatest dignity and fullest protection and power over the sale and dispensing of medicines, the two Apothecaries' Societies resigning the right or changing their title to that of Pharmacy. By resigning its licensing function the Dublin Hall would lose but £24 yearly, as thirty on the average take the licence for a fee of 16s. Many of these gentlemen are candidates for public services, and they cannot afford the College of Physicians' diploma, which costs twenty times as much. Moreover, as the school of the Apothecaries' Hall has been closed, no loss would be sustained in that respect. The alumni of this body should be altogether prohibited from medical practice, but both the medical practitioner, on the one hand, and grocers and huxters on the other, should be absolutely prevented from interfering with their legitimate business. Throughout the country and elsewhere, the public desiring it, there should be practitioners licensed by the Colleges of Physicians and Surgeons conjointly, who would both provide and supply medicines to their own patients only; they should not charge for the medicines, but for the advice, and they should on no account have any further interest in drugs. The following out of many most competent and disinterested authorities examined by the parliamentary committee on education, expressed their convictions against the plan of charging for the

remedies used—Sir Astley Cooper, Sir A. Carlisle, Sir B. C. Brodie, Mr. Carmichael, Mr. Donovan, Mr. Guthrie, Drs. Farre, Birkbeck, James Johnson, and Maunsell. On this matter we might advantageously borrow a lesson from our continental neighbours, as in France, Austria, Bavaria, Sweden, &c., the pharmacien is most highly educated and closely confined to his proper duties. The salutary effect of this restriction is well known. Such members of the body as Scheele found time to accomplish more for chemistry than perhaps any other man, save Sir H. Davy, who in early life also practised as a dispenser. It was said of the famous chemist Bergmann that "his greatest discovery was the discovering of Scheele." He nevertheless followed the phamaceutical art in König. Of the pharmaciens in Germany, Sir R. Kane says, "The majority of the leading apothecaries whose acquaintance I was fortunate enough to make were doctors in philosophy; in fact the apothecary is as usually the doctor in philosophy as the physician is doctor in medicine." Dangerous medicines can be only dispensed by the head of the establishment. In some German states there is another class called Wundärzte for the performance of minor operations—bleeding or cupping; but these the pharmacien might very well undertake. An analogous rank in Bavaria (Landärzte) has been recently abolished. The establishment, then, of a College of Pharmacy in each of the three divisions of the Empire would not only elevate this most indispensable science to a position of vastly increased usefulness, but would, by the accession of many valuable adherents, strengthen the ranks of physicians and surgeons; for as this innovation would never be retrospective, many apothecaries would elect to become practitioners. In Ireland it is especially desirable that the company should revert to its former position, and its name being changed to the Royal College of Pharmacy, that it should solely have the power

f licensing pharmaciens, to whom the sale of drugs hould be entirely restricted. Each of its licensees hould conduct establishments, just as the present es-ablishment in Mary-street is conducted. There, medi-:ines prepared under the superintendence of one of the ıblest chemists in Ireland, are sold wholesale and re-:ail—no other business is transacted. Unless the edu-:ation and examination in pharmacy be made more extensive for surgical and medical licences, I would not advocate the practising of pharmacy by such licentiates, and the sale of medicines by grocers and druggists (as at present qualified) is full of danger. All present apothecaries should be allowed to continue to act as before, or, if they desired it, to choose between the practice of pharmacy or that of medicine, or to postpone their selection for five years. Indeed it would almost pecuniarily serve those now so engaged, as no new-comers being admitted, and as the public would for some years continue to support this system, a monopoly would be established for such practitioners now registered under the Medical Act. No injustice was done to the existing Landärzte when the Bavarian government abolished that order for new-comers. The directors and licentiates of the Apothecaries' Hall comprise so many high-minded and public-spirited gentlemen, that there is no doubt, if the advantages of amalgamating the profession and separating drug-dealing from it were clearly demonstrated, they would be amongst the most earnest advocates of the reform.

If a supply of men to undertake the duties of pharmaciens cannot be had because they ambition medical practice, let the art of the apothecary be handed over to females, who, while they are by nature unfitted for medical or surgical practice, are in every way suited for the manipulative art of dispensing. In many of the French hospitals and dispensaries, the dispensers are females, and nothing can exceed their accuracy and neatness.

But the following example should not be adopted. In a small western country town, the widow of an apothecary still conducts the business, and doctors all kinds of disorders.

MEDICAL SOCIETIES.

The advantages of medical societies are numerous, and some of them were forcibly expressed by the illustrious President of the Surgical Society of Ireland at the last opening meeting: "Such societies, let me observe, are useful and necessary, because men, however great their learning, are apt to become indolent and indifferent to improvement for want of associating with others of similar talents and acquirements," and again, in discussing the modes of illustration and proof, he said, "How different must be the influence on the public mind of a case so supported and brought forward, and how superior must this influence be over that produced by the relation of a similar case when it is reported on the single authority of an individual however trustworthy." The acknowledgment of errors, to which the most perfect are liable, should be a distinguishing feature of learned societies. This was forcibly inculcated by Celsus, who may be translated as follows: "Little geniuses, self-conscious that they have nothing to spare, cannot bear the least diminution of their prerogative, or depart from any opinion they have embraced, however false and pernicious; while the man of true ability is ready to frankly acknowledge his errors, and especially in a profession where it is important to posterity that the truth should be recorded." The accurate and definite reports of law cases might be well imitated by medical reporters. If commissions were struck to investigate special subjects brought forward by members, or suggested by the council at the beginning of the session, great advantage would accrue.

In all large schools, students' societies should be

ablished for the reading of cases and essays on points interest selected by the teachers. Several students ose future was great appeared first as essayists on very subjects which afterwards made them famous, ircumstance exemplified by Astley Cooper's paper on)iseases of the Breast" at the Edinburgh Students' ;iety. This society has existed 130 years, and in it llen, Brown, Black, Monro, and Macbride (of Dublin) t broached the topics which have made their names ious. In Dublin two such societies meet, and in t city they are especially useful, as in one school the)ils of several hospitals will meet and communicate striking cases in each. One of the societies is en-ved with six annual prizes, encouraging original re-rch. The London Students' Society meets alter-ely at each hospital.

The change which is most required in medical so-ties, as well as in those which are engaged in the dy of the natural sciences, is amalgamation rather n multiplication. As it has been argued that there uld be but two branches of the profession, the me-o-chirurgical and the obstetrical, so there should be y two medical societies in such a metropolis as Dub-. In the two great Scotch cities such is the number, ; in so vast a metropolis as London more sub-division)vidently called for. In Dublin the Surgical Society ets every alternate Friday in December, January, bruary, March, and April, at 8 o'clock, in the College Surgeons, which body bears all expenses save those refreshments, for which a subscription of 5s. yearly fices. Discussion of the communications is allowed. llows of the college are *ex-officio* members, and are ne eligible for council—licentiates and other practi-ners of standing are elected by ballot.

The Medical Society meets monthly during the win-session in the College of Physicians; the fellows d licentiates of that body only being eligible as mem-

bers, but other practitioners can be introduced as visitors.

The Pathological Society (which owes its establishment and support to Prof. R. W. Smith) meets on every Saturday during the session at 4 o'clock in the anatomical theatre of Trinity College. Specimens are exhibited and described, no discussion being permitted. An annual subscription of £1 constitutes membership. A most valuable feature is the giving of a gold medal for an essay on a subject proposed five months before; twelve such have been given, and six of the recipients have already attained the rank of hospital surgeons.

The Obstetrical Society meets in the Rotundo, and has already done very great service in this speciality of the profession.

It seems most desirable and very feasible that the Medical, Surgical, and Pathological Societies should be amalgamated. A case or specimen of which the narrator is proud is often brought forward at more than one of them, which proves most tiresome to punctual members of both. Cases which possess no peculiarity or interest of any kind are also inflicted on the members, from the fact that the councils have no choice of communications to fill up the time, and the selection of purely surgical subjects at one, and purely medical at the other, tends to keep up the injurious division of the profession which we have dwelt on elsewhere.

The subjects of each meeting should be announced some days before to members, and in the medical journals, so that those interested in each topic should have notice. It is sometimes said that this would induce members to coach up—an advantage, it seems to me; but at any rate, it is adopted in all the best medical and scientific societies of the day.

The amalgamated body—for which "the Medico-Chirurgical Society" would be the fittest name—might meet once weekly from October to May inclusive.

ening has been found in every medical society most ıvenient, as many other engagements prevent attend-ːe in the afternoon. The Colleges of Physicians and rgeons should alternately give accommodation, and ɔse who wish still to keep up the separation between ysic and surgery might have the choice of submitting ɔir communications in one or other place. If the mber of papers increased very much, separate sec-ns, meeting in different parts of the building at the me time, might be arranged—a plan which, at Bur-gton House, has been found most advantageous. ıe members of all the societies should be made mem-rs of the new one; fellows of the two colleges and spital physicians and surgeons should be *ex-officio* ɔmbers, and other members should be elected by ballot 'espectively of their diplomas or the branches of the ofession they belonged to, the only qualification being idence that they desired to advance medical and sur-ɔal knowledge. Other practitioners, and such students residents and clinical clerks, who would most profit admission, should be admitted by members' orders, which only one should be allowed to each member, cording to present accommodation—but this should ı increased. Original members should pay 10s. yearly, a life composition of £5, and new members £1 yearly. he fund thus collected would provide refreshments, ɔar the expense of a separate volume of Transactions—r publication in the medical journals is not a sufficient ıcord—and would leave a considerable sum, probably 50, for the establishment of a prize-fund or of a cir-ılating library. The meeting should occupy at least vo hours, the first of which might be devoted to the ɛhibition and demonstration of morbid specimens, and ıe announcement of hospital cases still under observa-on. Committees might be struck for the purpose of ılly investigating cases which were confessedly obscure. ivery member should have a vote in the election of the

council; the method pursued in two of the societies—namely, the council nominating to vacant seats, should become obsolete, as it is in almost every other enlightened institution.

Another most valuable means for encouraging good fellowship among the profession is the institution of clubs or dinner societies, meeting alternately at the members' houses. The Pow-wow Club, which John Hunter established, was probably the first of its kind. In Dublin, among a few seniors, there is an analogous association, known as the Medico-Philosophical, the latter part of which title is often irreverently construed as *fill-œsophageal.* The juniors should meet for these by no means despicable purposes, plain fare and temperance being inviolable rules. In London a medical club, which affords all the conveniences of club life, has been so successful as to number 650 members during this its first year.

To relieve the pressing necessities due to disease and other ills among medical men and their families, the truly excellent Dr. Kingsley, in 1842, founded the Medical Benevolent Fund Society of Ireland, and richly endowed it by gift and bequest. It was not to be a benefit or assurance society; but, on the contrary, the imperative duty of providing for his family under emergency is urged on all. Over £9,000 has been since distributed, the largest number of applicants and the largest sum available having been those of last year, when they were respectively 85 and £850—figures accidentally proportionate. The funded property exceeds £15,000, nearly one-third of which is due to the munificence of Richard Carmichael. The affairs of the society are most fully published, the names of the recipients being of course only made known to the committee. Out of the 85 applications a few may be noted: "Widow aged 70—husband died of typhus—2 children, 1 insane; means, £10 per annum; £12 granted.

Widow aged 47—husband died of disease of brain—8 children from 11 to 24 years; means about £25 per annum; £15 granted. Widow aged 31—husband died of rheumatic fever—3 children from 2 to 5 years; means, £4 15s.; £15 granted." The request of this society to the College of Surgeons, that the portrait of its benevolent founder should be moved to a more prominent part of their building, was indeed reasonable, when the amount of good his intentions have wrought is considered.

In England, besides a benevolent fund for the widows and orphans of medical men, there is a college for the education of their children, which was founded and largely endowed by the late Mr. Propert, F.R.C.S.

QUACKERY.

No topic more aptly than quackery illustrates the truth that by little wisdom is the world ruled, and that unlimited is human credulity. Dr. Johnson thus defines a quack: "A boasted pretender to arts which he does not understand: a vain boasting pretender to physic: one who proclaims his own medical abilities in public places: an artful, tricking practitioner in physic." The history of quackery in by-gone days is full of amusing incidents. The prototype seems to have been Andrew Borde, a fellow whose absurdities and comicalities have gained for his disciples the epithet of "Merry Andrews" ever since. With the pedantic bombast of the day, he Latinised his name as Andreas *Perforatus—i.e.*, bored. To be explained as it may, the fact is undoubted that quackery thrives more in England than any other country, and especially since the Reformation.

Patronage of quacks by high, even royal personages has in all ages been common. For instance, Queen Anne selected as her oculists a quondam tailor and a cobbler, the former of whom she knighted. By puffing,

the vulgar were brought to believe in the nostrum thus patronised. It must be also confessed that the scholarly have also credited and profited by absurd nostrums; for example, the "Sympathetic Powder," which was alleged to cure people at a distance, was the composition of the most refined gentleman of the seventeenth century, Sir Kenelm Digby. Such renowned surgeons as Cheselden, Cæsar Hawkins, and Sharp signed a petition to the House of Commons, on which Mrs. Stephens was granted £5,000 for divulging her remedy for dissolving stone in the bladder. It consisted of calcined egg-shells and snails, or lime obtained by a filthy process. Its inutility was shortly proved by the death of the famous Dr. Hartley by calculus, after he had taken 200 lbs. of the remedy! He had been one of her main advocates. "Touching" for the evil was approved of by Wiseman, the most illustrious surgeon of the seventeenth century; and by his advice 92,107 scrofulous persons were touched by Charles II.

Instances of superstition and credulity in medical matters have afforded matter for volumes—in fact, they have been rich carcasses on which the worms of quackery have fattened. Where the malady is mental, as is the case with the complaints of weak-minded hysterical women or half-witted enervated hypochondriacal men, the remedy should be mental. Every hospital and dispensary attendant, still more easily every practitioner in fashionable life, can call to mind cases in which patients believed themselves cured by inert medicines, faith in the prescriber's skill having really wrought the cure. Dispensary patients told to "put on that plaster" or "take that medicine," have stuck to their chest the paper upon which the prescription was written or swallowed it, and at the next visit expressed themselves relieved. The homœopaths may allege that in such cases the iron in the ink has really produced the amendment. I may here remark that it is far more becoming

in the physician to dissipate by explicit reasonings and persuasion the hallucinations of weak-minded and dyspeptic patients than to promise relief by inert remedies. To extract money under such circumstances is dishonorable. Accordingly as medicine improves its position as a well-defined science, quackery will wane. The principles of surgery are more positive, and therefore there are no quacks assuming that branch of the profession, unless those who vaunt their doings to the public can be so regarded.

Extravagant laudation for services of some value is the characteristic of the charlatan; thus the commercial speculator who introduced that valuable hygienic agent the Turkish bath into this country, has been with infinite absurdity compared to Harvey and Jenner, whose glorious and unselfish achievements have rendered their names immortal.

In combating this hydra-headed monster, which has from the days of the mountebank constantly afflicted these lands, I shall briefly and as dispassionately as possibly discuss the claims for credit which its more successful and definite forms possess. So far from its being to the pecuniary interest of medical practitioners that quackery should be suppressed, many of their weightest "cases" are to be debited to it. It is therefore disinterested in our profession to expose and suppress such a client. The medical profession has never sought laws to abolish quackery that they might have the greater monopoly, but to protect the public against fraud and injury to health.

Firstly of homœopathy, as it is one of the most long-lived and has obtained adherents of more weight than other systems. It has been fashionably patronised in Dublin, and the valuable life of one of the most distinguished citizens was lately sacrificed by its practice. Specifics in medicine do not probably exist; but bark, in the cure of ague, approaches more nearly to that character

than any other agent. No satisfactory explanation of its action has been determined, and therapeutists content themselves with the term "antiperiodic," as it seems to check the return of the ague-fit at its accustomed intervals. Hahnemann, while translating the Materia Medica of the great Cullen, resolved to settle the question, and took, although in health, some of that drug. He forthwith announced that he was, after the taking of this agent, and therefore because he took it (a most common and dangerous fallacy in medical experience), seized with the disease in curing which it has such surprising power. On this foundation he built the system of homœopathy (*ὅμοιος-πάθος*), adopting for his motto, *similia similibus curantur*. His countrymen, who always delight in such novel and visionary theories, gave implicit credence, and would have raised him to the highest pinnacle of fame, or indeed almost deified him. Few can fail to be struck with the contrast this behaviour presents with the reception of real discoveries, which have often served only to heap on their originators obloquy and persecution. Ignorance of physiological subjects and the credulity which it inspires have, as is the case with all quackeries, supported homœopathy. Sir J. Simpson relates a ludicrous instance in which faith alone must have cured the patients. The globules of a practitioner got mixed thoroughly and then divided into their bottles by some children in sport; yet with these several astounding cures of divers diseases were afterwards reported. The principal doctrines which homœopathic manifestoes promulgate are—1st. That as certain drugs given internally will produce disease ar symptoms of disease, these drugs are the appropriate remedies for these maladies when they arise spontaneously, *e. g.* for erysipelas such medicines as will produce redness of the skin, for leucorrhœa, leucorrhine (!), and for syphilis, syphiline (!). A knowledge of the human organisation is quite superfluous, and indeed other branches of the

medical science, as these remedies are merely addressed to symptoms. By a lately advertised homœopathic nostrum, relief is promised for facial neuralgia by painting it over the motor nerve of the face, the inventor being ignorant that it has no connexion with sensibility. 2nd. That all maladies of a chronic nature arise from syphilis, sycosis, or psora; this latter agent, imaginary unless its English translation "the itch" be allowed, produces a crowd of heterogeneous maladies, from fungus hæmatodes to hypochondriasis, which appear to ordinary mortals somewhat dissimilar, as well as most of the moral turpitude which disgraces humanity. Amongst other remedies for psora, and especially for aiding "spiritual conversion," the swallowing of lice, or a decoction of them, is gravely recommended, as these creatures tickle the skin. The 3rd fundamental principle is, that medicines act in doses infinitely more minute than generally supposed. The billionth of the murderous quantities which allopaths administer is sufficient. They admit the existence of various temperaments, and therefore cautiously advise that not more than a dose of sulphur shall be given to an excitable person every fourteen days! They prescribe a decillionth of a grain, which is so small a proportion that if every being on the globe were to take this dose momentarily they would not finish the grain for thousands of years. They have invented a safe way of administering medicines—namely, the smelling of a phial containing an infinitesimal globule of the required drug; and it is said that a lady treated by this mode fairly remunerated her prescriber by passing a guinea under his nose and then replacing it in her pocket.

Hahnemann promises to restore "a morbidly desponding individual, with a constant inclination to commit suicide, in less than an hour to a peaceful state of mind, to love of life, to happiness and horror of his contemplated act, if he perform but a simpleo lfaction in

the phial," containing a dose of gold so diluted that a grain would require for its preparation a mass of sugar fifty times larger than the earth!

It has been lately ascertained that flames will pop up and down accordingly as sounds of different pitch are produced near them; the observer of this fact has publicly attempted to draw an analogy between it and the assumptions that the human body will be affected by medicinal agents of almost incredible minuteness, and that persons *en rapport* with a mesmerist will obey his will. Such explanations may suffice for credulous persons ignorant of physiology, or for those whom mechanical studies have muddled. Again, homœopaths assert that the activity of medicines is increased in a regular ratio to the number of shakes the bottle containing them receives. Truth has limits, absurdity indeed has none. People will believe in medical absurdities who will reason soundly on aught else in nature, and there seems no folly so ridiculous that it will not find minds fitted to adopt it. To any physician who may be at all wavering, the best cure is the perusal of a homœopathic work. For the practice of homœopathy implicit obedience is exacted, but that it is not rendered is certain; for homœoquacks, although professing disbelief in the teachings of medicine (the ranks of which they have left, as by pandering to these fashionable and ephemeral foibles they acquire more lucre in proportion to their knowledge), give ordinary doses of medicines, selecting for lesser bulk the active principle. The adoption of any allopathic method is directly dishonest, as they all profess, or in some instances have publicly sworn, to ignore them.

Many cases of overdosing with active medicines have been authoritatively recorded; for instance, that proved by Professor A. S. Taylor, where a lady was poisoned by an overdose of morphia, and that of the Duke di Cannizzaro, who perished from nux vomica, administered

by a homœopath. They attribute to the most inert substances wonderful curative properties—silex, or flint, curing, they assert, that unimaginative affliction whitloe; and to carbon the cure of a list of ailments too long to be enumerated. It is a matter of surprise that disease should exist at all when those who live, especially in towns, are compelled to ingest involuntarily such quantities (enormous, in a homœopathic point of view) of these agents. The fallacies of homœopathy have been again and again demonstrated on hospital patients in great numbers. Very convincing, though not the most recent results, were those obtained by the illustrious Andral on 130 patients in "La Pitiè," and he reports that its dogmas were utterly illusory.

Illustrious men have no doubt credited homœopaths, but the same may be said of every human fallacy which history records. In his later years a famous divine was said to believe in this quackery; yet, in his "Logic" may be found many passages which do not warrant the practice of physic by those who profess to consider education in its doctrines unnecessary—for instance, "A sailor will perhaps despise the pretensions of medical men, and prefer treating a disease by common sense; but he would ridicule the proposal of navigating a ship by common sense, without regard to maxims of nautical art."

Sir James Simpson aptly quotes Sir Thomas Browne's *Pseudodoxia Epidemica:* "Men often swallow falsities for truths, dubiosities for certainties, feasibilities for possibilities, and things impossible as possibilities themselves." The work on homœopathy by that illustrious physician thus concludes: "Surely common sense and common sanity both dictate to the human mind that it is utterly impossible that any such inconceivable ocean, medicated by a single grain of any drug dissolved and mixed in it, can have any possible medicinal effect on the human body, either in a state of health or a state of

disease; and looking at these, and the many diversified facts confirmatory in all respects of the same views which have been already stated in the preceding pages, we cannot but conclude with a writer whom the homœopathists themselves regard as the mildest and fairest among their opponents, namely, Dr. Forbes, that in rejecting homœopathy 'we are discarding what is at once false and bad, useless to the sufferer, and degrading to the physician.'" We trust that one benefit will accrue from homœopathy—namely, the discouragement of the drugging system, that is, making profit by the quantity of physic swallowed, which must have compelled many people to take refuge in the small-dose system.

HYDROPATHY.

That water possesses powers therapeutic and salutary in a high degree, no intelligent physician was ever ignorant, but to laud it as a panacea is truly ridiculous. The habitual ablution of the whole body, the ingestion of pure water daily, instead of stimulating drinks, and the local application of it in many kinds of superficial disease, are practices of the greatest value. Add to these the wholesome hygienic rules which are enforced, the freedom from habitual care and the worry of business, the regular hours, and the increased exercise, and no one will regard with surprise the cures, at first apparently almost magical, which have taken place in some of the sanitoriums of the disciples of Priessnitz. I have no doubt that rational practitioners with advantage might imitate more frequently their hygienic observances. To assign, however, to water a universal power over all diseases, and to exceed the rules of common sense in applying this agent, is either to ride a hobby to death, or is to practise on, with but little conscience, the credulity and foibles of mankind. The conduct of regular practitioners towards these and other charlatans is manifestly to enlighten their dupes, but to hold no

controversy with those who must feel that conviction before the public would deprive them of their livelihood, and never, therefore, will be convinced.

The waste of tissue is so unduly promoted by the excessive ingestion of water, that many who fanatically pursue the water cure become wretchedly weak and emaciated. As Baron Liebig has, without reason, been stated to favour hydropathy, it may be well to quote his sentiments in his own words: "The existence of hydropathic institutions—those dens of covetous and rapacious gamblers, where the wretched invalid resorts to throw dice for health and life; the rise and progress of the homœopathic system, which treats truth with scorn and bids defiance to common sense, loudly proclaim the need which exists for the adoption of settled principles, definite methods of research, and a systematic arrangement to guarantee their attainment and retention."

BOTANIC AND ADVERTISING QUACKS.

With regard to the botanic quacks or hygeists, it may be mentioned that one class of them, the Thompsonians, have a college for educating and licensing their followers, chartered by the State of Georgia.

The indirect yet fatal mischief which these quacks and their effusions produces was well illustrated at an inquest in London a few weeks since. A shoemaker had acted as doctor to his own child suffering from measles and pneumonia, although warned by his landlady, a nurse, that he was letting it die. When cautioned by the coroner he said: "I cannot criminate myself, for I acted according to the book. I put it in in evidence. I did everything that the *Family Medical Adviser* directed. It is written by John Skelton, physician, surgeon, &c., author of 'A Plea for the Botanic Practice of Medicine; Botanic Record and Family Herbal. It is through our ignorance that plants are

despised. Published by the author, at 105 Great Russell-street.'" After the jury had in their verdict severely censured him, he asked, "Are you going to pay me my expenses?" The coroner's fitting reply was, "No. You ought to be horsewhipped; and if I had the power I would do it."

MESMERISM has almost run its short-lived course, and will soon be numbered among the popular superstitions which have existed. There seems to be an automatic state of the mind during which the suggestions of others are, as it were, echoed. The subjection of the will and feelings of persons, as said to be practised by those who call themselves electro-biologists, is believed in by so many intelligent persons that it is worthy of investigation by scientific and disinterested men. It seems, however, strange that if there be any truth in the art, it has not been used for the relief of pain, or some such beneficial purpose, and only for gathering up the shillings of the multitude. It is lamentable to record that Elliotson, one of the most brilliant of our ranks, lent himself to this and the kindred fallacy, animal magnetism. Kinesipathy, cure by movements, and other similar quackeries, do not deserve enumeration. Of quacks Professor Gairdner, in his eloquent address on medicine, says: "Let them live their day—they are the woodpeckers of science; the grand old Hippocratic Oak will outlive them, though the insects that nestle in its bark will become their lawful prey."

The quackeries which most loudly demand redress are the advertisements of patent medicines, and those of an obscene character. It is most reprehensible for government to lend its aid to the sale of injurious nostrums by affixing to them the official stamp—an expedient which, it must be confessed, was suggested by Dr. Radcliffe, the founder of the great library at Oxford. He was so illiterate that Garth said, "For him to leave a library was as if an eunuch should found a seraglio."

Surely the revenue can be supported in some more wholesome way than this licensing of persons to kill human game, and as the unwary are apt to value these drugs because they bear the government stamp (believing that it would not be affixed unless they were really judicious and approved of), vast mischief is inflicted on society. In Scotland, where the literary taste of the people has diffused much common sense and some knowledge of medicine, it is said that in one year the stamp duty on patent medicines was £50, while it was in England £42,000. Half a million is probably wasted yearly on quack medicines—a sum which exceeds the receipts of all the hospitals and medical charities of London. The absence of any active ingredient is not so harmless as might be supposed, for it produces delay and the neglect of proper measures. The presence of the most noxious and inappropriate substance in these quack preparations has been often demonstrated. Not only is the getting of money under false pretensions promoted, but loss of health or of life is likewise involved. The schemes by which quacks impose on the credulous people are innumerable. The assumption of medical titles, without specifying any licensing body, the adoption of some very ordinary name, which is sure to have some representatives on the register, the omission of some initials in the abbreviated form of medical titles, the invention of some new one, and the quotation of imaginary reviewing journals, are but a few. The impudence and perseverance with which they advertise these nostrums, assigning to them, by testimonials from usually imaginary individuals, the cure of every known disease—though a lucky hit may now and then occur, and will not be forgotten, though fifty failures might—the audacity with which they steal the names of famous medical men, and their thousand-and-one dodges, would excite amusement were not this death-dealing system becoming every day more serious, in regard to the

victims it hurries, often without time for repentance, before their Maker. Common sense, we have elsewhere shown, is never exercised by the public in regard to medical subjects; thus, it never occurs to people that if there were any virtue in "life pills" and other universal and infallible medicines, insurance companies would make it a condition of a policy that they should be regularly swallowed. It is never noted that empiricisms are short-lived, and that discoveries which benefit thousands are made by the obscure and unrequited student. Opposite to one of the licensing institutions in Dublin a fellow practises, and it is said carries on the vile occupation of a procurer. He impudently placards himself as "accoucheur," and thereby evades the faulty Medical Act. Eighteen centuries ago Pliny wrote, "Of all the arts medicine is the only one of which any one may boast a knowledge and have immediately ready listeners. There is, however, no set of impostors to be more feared than those who falsely assume the character of physicians. There is, notwithstanding, no law to punish so serious a deception." Can we boast of improvement this day?

During the late epidemic cholera great harm was done by ignorant amateurs. One gentleman vaunted cures by tincture of camphor in water. The camphor would of course separate, and be almost inefficacious. After several of this person's "cures" had been puffed for weeks, he discovered the fact just named, and, following the homœopaths, asserted that unless the tincture was taken without water it would be useless. By the way, a favourite homœopathic remedy for cholera is to put a penny on the pit of the stomach, because workers in copper are said to be singularly free from the epidemic. Another fellow advertised in page 75 of the advertisements in "Thom's Directory" of the year 1866, as being able to cure all ills, from "toothache" and "eye diseases" to "gout" and "fever," and at the same

time as a watchmaker. He pestered the Public Health Committee after the following style: "As the moment of threatening danger of that epidemic disease, cholera, being likely to extend itself to Dublin and Ireland generally with its devastating influences, it is painful to know not a single remedy should have been provided against so terrible a scourge by the medical faculty. There is, however, a sure and efectual (*sic*) remedy in my own possession, which I now beg prominently to bring before the notice of the public at large. For the efficacy of the remedy I here pledge myself with my whole existence. The question may be asked, and not without reason, why has such a valuable remedy not been brought to the notice of the medical College of Physicians at Dublin? In replay (*sic*), I can say only, that some short time ago I offered the same to his Excellency the Lord Lieutenant, who refered (*sic*) me to the medical college. I went to several hospitals to give proof of the remedy, but my consultation met with no result.

"I humbly beg that your worship will feel induced to recommend my remedy most urgently to the supreme government, for I feel quite confident my remedy, however simple, will set a barrier to that awful scourge, cholera."

The article which he had to sell, and which he has sold among many of those who ought to have possessed some common sense, was a combination of needles, to be thrust into the skin, and an oil (probably croton), which produced extreme pain and an eruption. He succeeded in obtaining the medical attendance of scores of persons in a large establishment near Dublin. He was but the imitator of the quack Baunscheidt, who infested Germany and the United States for years.

There can be no doubt that the proprietorship of certain patent medicines and appliances, and untiring efforts to bring them into notoriety by advertisement, are directly contrary to the spirit of the science of medicine,

which would wish to see all its means most freely utilized for the benefit of mankind. The London College of Physicians declares, "No fellow or member of the college shall be engaged in trade." The government, on the other hand, proclaims that it grants patents to encourage the inventor to spend his energies in attracting public attention to his improvement. The right-minded physician, however, feels a nobler reward in announcing the discovery of any mode of treatment which it may be his privilege to initiate. If, however, the physician's superior knowledge of the laws of physiology or of physics enables him to improve on such processes as the modes of preserving food or the arranging of water-supply to houses, he seems justly entitled to commercial profit from his invention, its sale being left to traders.

The evil, however, which exceeds all others in enormity, as bodily health is not only injured, but public morality is also lowered, is that of allowing disgustingly obscene advertisements to appear in the public papers, and to be freely circulated by means of handbills. To their credit be it stated, that several of the leading journals have refused to admit these degrading announcements. How any father can permit some of the newspapers to be perused by the female members of the family is most astonishing. Very many instances have occurred of ladies having their purest feelings shocked and offended by these abominations sent to their male relatives, or thrust into their hands as they walk the streets. If such offensive scoundrels cannot be punished in the police courts, personal chastisement is the only fitting deterrent. The newspaper proprietors are also most culpable, for they must know how anxious and credulous the sick are, and how easy a prey they become to the advertising quack through their aid. The conduct of Mr. Bailliere, the publisher, on a recent occasion, is

worthy of imitation. He refused to publish the work of a medical man who was in partnership with a quack.

It is ardently to be hoped that prosecutions under Lord Campbell's Act will suppress these effusions, as they surely are "immoral publications." A stroll through Holywell-street will, however, convince any one that the authorities neglect to enforce this Act, and at night, through the streets of Dublin at present, a fellow stealthily sells obscene prints enclosed in envelopes for one penny each.

The inefficacy of the present legislative enactments to suppress quackery is apparent, and as their subterfuges are indeed "hydra-headed," it is difficult to suggest adequate penal measures. Some of the smarter of the charlatans would, owing to laxity of licensing bodies, obtain qualifications and continue their practice within the profession, where it must be allowed certain ways of quackery are not unknown. Men who wittingly and most selfishly prey upon the credulity of their fellow-beings, belong just to the class from whom such fiends as Palmer and Pritchard might be expected to arise, for between the dishonest principles of quackery and secret poisoning there is close psychological relation.

The grand remedy before which quackery will gradually disappear is, without doubt, the diffusion amidst the people of an elementary knowledge of physiology. It has been objected that a limited knowledge on these subjects would increase, not diminish the evil, by making every one confident that he was able to doctor himself, and many a time has been quoted the line (which is in all aspects by no means true),

"A little learning is a dangerous thing."

Any one who understood the complex and wonderful organism of the human body, would hesitate to place the care of its derangements in the hands of one utterly

ignorant of its healthy mechanism, and would not have faith in absurd infinitesimal doses, water-dosing, or some pill or potion in every ailment. Physiological science should be then diffused by means of treatises written in a plain, intelligible, yet accurate style, and then should be made the subject of school or college study. Freedom from technicalites would not only be a desideratum in popular, but also in professional books, which are too often crowded in the most pedantic manner with new and unpronounceable names, for which more pleasing, though homely English words could be better substituted. Quacks delight in hard names; a fellow lately prosecuted for procuring abortion described himself as a "member of the Eclectic and Hygienic Institution." The unwillingness of physicians, in days of the gold-headed cane, to speak intelligibly to their patients, and treat them as reasonable beings by explaining something of their maladies, undoubtedly fostered quackery. Men of the Chesterfield type always abstained from asking such explanations; and Sydney Smith, who in his youth studied medicine, says, "I often regret that medical men will not talk more of their profession; it is a very interesting subject—at least a little of it, but I can never get any one of them to speak; they look quite offended." His own profession has, however, been often accused of a similar reticence. Medicine, instead of a desire to hide or conserve, especially of late years, has been characterised by a desire to increase and spread knowledge towards the prevention of disease. It cannot be denied that the clergy have very often fostered and practised quackery, and it was for this reason probably that the Bishop of Exeter, a few years ago, proposed to institute a medical diaconate. A knowledge of the laws of health, and some of the more simple principles of the treatment of disease, might undoubtedly be made available by the minister of religion and by the general public, if suitable treatises were published by some eminent physician or, still better, by some medical body.

The delivery, too, of lectures fully illustrated, but avoiding all clap-trap, would confer incalculable benefit. These subjects have been made the matter of examination by the Universities of Oxford and Cambridge of youths "not members of the university," and have been introduced into the arts course of some other universities and colleges. Notwithstanding a memorial to the President of the Privy Council by sixty-five of the most eminent medical men in London, the subject is not yet taught in common schools in England. In Ireland the Education Commissioners promised to have a reading-book on health prepared, the matter having been brought before parliament last session. In America they have been in advance of us, for in some of the States there are special enactments requiring physiology and hygiene to be taught in the public schools.

Sanitary organization will always be incomplete and inoperative without the aid of the popular educator, for a thorough system of inspection of the circumstances prejudicial to health is resented by those who do not understand its advantages, and they will not believe in the appropriate maxim of Dublin city, *obedientia civium, urbis felicitas*. The teachings of hygiene do good by suggesting rules for individual management, and especially by preparing the popular mind for matters of sanitary reform, which among the ignorant or parsimonious often meet with apathy or opposition. With regard to the effect of external agencies on the health of our bodies, ignorance and desperate negligence prevail even amongst the most refined classes, and the efforts of physicians are thus often frustrated.

The suffocation of persons in holds of vessels, beside lime-kilns, or in wells, and the deaths of infants from ignorance of the fit mode of caring them, would no longer shock us if such subjects were taught in national schools.

It behoves every great educational establishment to institute professorships for the instruction of students of

all professions in that knowledge so essential to the preservation of health. Moreover, the study in the proper spirit of the perfection of creative power is calculated to awaken and cultivate the noblest and highest emotions of our minds, and raise our thoughts above mundane aspirations. Well might the anatomist of old exclaim that in writing his great treatise, he felt he was composing a hymn to the Deity. Such studies are certainly more humanizing than those of disused languages or obsolete historical facts.

PART II.—EDUCATION.

PRELIMINARY AND MORAL EDUCATION.

AMPLE preliminary information should be insisted on from students of the noble profession of medicine for the following reasons—first, to improve the social status of the practitioner; and, second, to make the acquisition of professional knowledge more facile. The possession of general information on literary and scientific subjects would indisputably tend to elevate the relation which the medical man bears to general society, and cause him to be regarded by the educated in every walk of life as a companionable gentleman, and not (as is now too often the case) as a mere servile trader. Any educated gentleman, however, might justly refuse to the vulgar and unlettered that respect and confidence which the family physician must possess. One of *Dr.* Lever's best novels, "Sir Brooke Fossbrooke," admirably contrasts the refined physician in the character of Dr. Beattie, and the vulgar practitioner, of whom Sewell, the man of the world in the novel, remarks, "These fellows begin life as such cads, they never attain to the feeling of being gentlemen!"

An increased literary and professional course, moreover, would exercise a beneficial check on overcrowding—an evil often anticipated. If this outer gate of the profession were fitly guarded, persons whose mental capacity obliges them to give up the profession after loss of time and money, or, if they manage to pass, to practise it with discredit, would be excluded. It would be far more merciful to save them from these evils by a

suitable initiatory test. Inasmuch as nearly all the nomenclature of medicine and its collateral sciences is derived from the classical languages, a knowledge of them is desirable. Of the two, Latin is the more indispensable. Prescriptions will continue to be written in that language, as they are thus more universally applicable, and it is not always desirable the patient should know what is prescribed. The Medical Council has wisely determined that the British Pharmacopœia shall be in English, as also should be the directions for the patient. A knowledge of Latin would enable the student not only to read the elegant writers of antiquity, but also to peruse with great advantage the medical classics and older scientific works in that tongue, which are now unfortunately out of fashion. A few years ago diplomas were printed in Latin, but so unlearned were some of the doctors that at further examinations for licences they were not able to translate them. Greek also is most useful, as all the roots of technical terms are borrowed from it. It is undeniable, however, that there are many subjects now neglected in schools which, as instruments for training the mental faculties and for affording useful and interesting knowledge, are far superior to the dead languages. To take Mr. Lowe's illustration, it is better that a lad should be taught something about the site and uses of the liver than that the Greek for it was *hepar* and the Latin *jecur*.

Mr. Lowe's address was, indeed, remarkable, abounding in accurate logic, caustic wit, and most apposite illustrations, which were not the less valuable because they brought reflected light from different trains of thought. He argued that nature begins with the knowledge of things, and words will follow. So much labour is spent on languages that Heine exclaims, "How fortunate the Romans were that they had not to learn Latin grammar, because if they had done so they never would have had time to conquer the world." Lads

about to begin the study of medicine are usually quite uninformed on the principles of natural science. This very much depends on the very inferior position which these subjects hold in the old-fashioned universities, for they are "unfairly handicapped endowments," half a million more being yearly given for pure classical and mathematical excellence. Those who would decry the over importance assigned to classics might well quote the saying of John Hunter to Sir A. Carlisle: "They wanted to make an old woman of me, or that I should stuff Latin and Greek at the university; but" (added he, significantly pressing his thumb-nail on the table) "these schemes I cracked like so many vermin as they came before me." This disinclination to literary study may account for the obscurity with which he conveys his greatest discoveries and his ill success as a lecturer. When a lad has begun medical work he should give up classical study, or only pursue it during vacations, which he must do if he has not adopted the Council's advice to pass it before he commenced medicine.

In Ireland, however, it does not seem to be the exhaustive study of languages which leaves no time for the acquirement of scientific knowledge, for many a doctor fails in writing a grammatical letter to the poor law guardians, for example; and Sir D. Corrigan asserted that "under the present system, young men get into the profession who could not pass an examination for the place of a letter-carrier." In times long past the doctor and the priest used to be appealed to when some literary crux having been suggested, the schoolmaster had been found wanting.

The French and German languages are of infinite service to the educated physician, for besides their scholarly value the brilliant successes of the one nation, and the laborious investigation of the other with them, become his own. However, far above all in importance is the knowledge of our own language, its grammar and

literature, and the art of composition, including *precis* writing. Its value cannot be exaggerated, and ignorance of it has produced many failures before the examining boards for public services, where it is thoroughly tested. In the drawing up of reports and medico-legal opinions ignorance of the common rudiments of an English education is too often lamentably displayed. Every student should also cultivate a bold legible style of handwriting, an advice which the highest authorities have publicly urged. It would be well if the study of logic was insisted on as a subject of preliminary, not as it was for a short time by the army service, during professional education. This science admirably trains the mind to habits of thought and reasoning, the most estimable of the faculties:

"He most lives
"Who thinks most, feels the noblest, acts the best."

Want of acquaintance with the principles of logic is often displayed in the deductions which are made from recorded facts or statistical tables in medicine. The study of ethics, too, is an appropriate training for him who must hereafter possess the keenest sense of honour, the feelings and infirmities of men being confided to him.

That exact science, mathematics, is indispensable to any educated man, and its uses to the scientific student of medicine could be illustrated by numerous examples. Mathematics and mathematical physics were Boerhaave's chief means of physiological research, and a mathematician of our own day, the Rev. Dr. Haughton, has adduced a theory of muscular force which may be usefully applied in the construction of locomotive machines. The famous Auguste Comte asserts that astronomy is a fit subject by which to train the medical student's mind. The elements of the natural sciences, including natural philosophy, chemistry, and natural history, should be mastered before studying medicine, as their importance is very great, and their advanced investigation cannot be attempted in the

schools unless the rudiments have been acquired. To many students educated in Dublin, the instructions of the late Dr. Lover have been of great service, although delivered only to school-boys. To the medical man especially, as the faculty of observation is trained, but indeed to man in every walk of life, the study of natural objects and the laws which govern them, is of use: "Study the ways of nature, and be wise." Pliny urged their special importance to the medical man: *Rerum naturæ contemplatio quamvis non faciat medicum; aptiorem tamen medicinæ reddit atque perfectum.* Such studies could not be better advocated than in the words of the prospectus of the "Surgical Society," published in 1831: "It is a great mistake to suppose that the study of those branches of knowledge not immediately connected with the management of disease, is incompatible with the pursuits of one engaged in the active practice of his profession. Boerhaave, the most celebrated practitioner of the period in which he flourished, was one of the most distinguished of chemists and botanists; Haller, in the midst of his multifarious pursuits, could find leisure to collect, arrange, and catalogue the plants of his native country; and Linnæus himself proved that his devotion to botany did not incapacitate him from the successful practice of his profession when he found it necessary. Reference to the works of Albinus, Camper, Hunter, Rudolphi, Caius, Meckel, and many others, confirms the truth of this position." Natural history renders precise the observing powers of the mind, and exercises the faculties of analysis and synthesis most completely. If our licensing bodies were to insist on the possession of such knowledge before students commenced, schools would be stimulated to teach it. If they did teach chemistry and botany efficiently, the licensing bodies should be satisfied by the students passing full examinations in these subjects at the same time as the literary subjects were examined in. This would remove the necessity of

having chairs, and the expensive appliances connected therewith, in every medical school, for the applied facts of chemistry might be taught by the teachers of physiology and forensic medicine, and medical botany by the lecturer on materia medica.

There is yet another study which must be advocated, even at the risk of appearing to over-burthen the student's energies—namely, the principles of drawing. Its merest rudiments enable the instructor to explain difficult points more intelligibly than verbal description could ever do, and the learner acquires, even by a very elementary knowledge of art, a more thorough insight into medical subjects so capable of illustration. The practitioner can likewise represent any unusual object which he may meet with. Many of our ranks have exercised this talent without interfering with their more immediate duties. It has been said, "Had not Sir Charles Bell been a surgeon or a physiologist, he might have been a great artist, so admirable were his drawings, so exquisite his perception of the beautiful. This talent was with him a favourite, and might be cited as an instance of 'the ruling passion strong in death,' for he was engaged in sketching the gay scenery of Worcestershire but a few hours before his decease."

It may be asserted that the expense of so extensive a preliminary education would exclude from the profession all but the sons of the wealthy; but the case of students for the church of all denominations disproves this; they most usually come from the less wealthy classes, but they must go through a most prolonged literary course before beginning their theological studies.

An arts course and subsequent graduation in a university is of course of great value. For many years, however, the system of private examinations after term, or "term-trotting," as it was called in the old universities, depreciated very much the respect which an arts degree should carry with it. Unless students

commenced an arts course early (Bacon entered Cambridge at fourteen), it is not advisable that they should spend four years at it, for these are the very years when the mind is most capable of learning the practical duties and kind of knowledge which make the good physician. It is made compulsory in many universities, and in France the more appropriate degree of bachelor of sciences is necessary, and the University of London has established such a degree. However, the expense of time and money, especially at present, when the requirements of the public services encourage such rapid education, will prevent the general adoption of a previous university course. Besides, the preliminary studies enumerated above constitute a far more serviceable and appropriate introduction to medicine than the arts curricula of some universities. It is very much to be regretted that scholarships and other valuable endowments are not given in the older universities for proficiency in natural science, instead of being wholly restricted to classics and mathematics. The forcing on the student of several subjects represses the mental development of youths who would prove superior in one or two; and after a general matriculation greater choice ought to be allowed. Before the student commenced his professional studies, or—considering the disabilities youths labour under from the want of intermediate schools in many parts of this country—during his first year, the matriculation examination should be passed. It should embrace the foregoing subjects, as now included in the list of the London University, which is as follows: 1, Classics, including the Greek and Latin languages, with grammar, history, and geography; 2, The English language, English history, and modern geography; 3, Mathematics; 4, Natural philosophy; 5, Chemistry; 6, Either the French or the German language.

All this may seem too much to expect, but anyone who has had the opportunity of examining even the pupils

of a national school throughout Ireland will see otherwise. This examination should take place about four times a-year—say in October, January, April, and July—and should be by questions, both on paper and *viva voce*. If considered desirable, officers might be sent to the principal towns in the provinces, to set written questions prepared for the purpose in the metropolis, where all the answers might be examined together. The institution of an honour division, and perhaps some other distinctions, would be desirable.

I regard it as the greatest defect in medical education that the student is left desolate and friendless, without anyone to guide and control his studies—truly, "sheep without a shepherd." He is also destitute of the benefit of good example by being allowed to reside wherever he may chance to be led; to attend to or to neglect his duties as he may think fit. This system is manifestly full of danger in leading to a most desultory kind of study and conduct. The only remedy is the establishment of a proper system of collegiate residence and discipline, such as the alumni of all university colleges enjoy. The chief colleges or schools should erect plain yet commodious buildings, within which students should reside (an exception being made in the case of those who lived with parents or relatives, or in other approved places). They would thus be under the supervision of a board constituted of the lecturers, and more immediately under the care of tutors residing in the college, analogous to the plan of the Universities of Oxford, Cambridge, and Dublin. These officers should have a limited number of pupils, placed by their parents under them for instruction and control. A warden should have the government of each establishment, and every student should sign a solemn declaration of obedience to rules. A moderate quarterly charge (say £6) for two furnished rooms, would repay the authorities of the educational institution, who should alone undertake it, as no private

individuals could possess weight and authority enough to preserve decorum and propriety. A deposit of £2, to pay for breakage of furniture, should be made. A hundred residents, at the rate of £18 for the nine months, would produce a yearly sum amply sufficient to defray wages of attendants, lighting, firing, rent, &c., and also to gradually reimburse the original outlay in building and in furnishing. Such institutions are now in existence in Bartholomew's Hospital, and to a limited extent in King's College, London, and are almost universal in continental cities. Whole board is usually supplied, but it would be more desirable that the inmates should meet together at one meal only—say, dinner. There would be no objection to non-resident students dining at commons also. All would gain greatly by the friendship and good-fellowship thus encouraged, and by conversing with one another on the subjects of each day's studies. The association of the students, under the vigilant care of the resident authorities, would be most useful; the idle would profit by the example of the industrious, the homely would become polished by contact with the more refined and educated, the timid emboldened by the self-reliant, and the too-confident repressed by the more modest. It might be objected that so large a number of lads, differing much as to means, rank, &c., would not consort quietly and harmoniously; but anyone who has had experience in the management of medical schools will see the incorrectness of this, for he has found that differences most rarely arise, and if they do, that they are reconciled or obliterated in the most happy manner. Regular hours, the strictest moral discipline, and the observance of the duties of each religious belief, the ministers of each faith being invited to co-operate, should be most absolutely enforced by punishment and perhaps rewards. King's College, London, is the only medical school in which daily religious service is arranged.

In Irish schools it would be impracticable. A uniform academic costume, trivial though it may seem, would tend to elevate the student's position in public estimation, in which it is often most unjustly too low. The honoured student's gown would hide the loud travesty of the fashions which a few students affect. The behaviour of students of medicine is not more frivolous or dissipated than that of any other class of youths exposed to the temptations of a great city, and the bad name they sometimes have has been acquired by the fact that many police-office rouès, in reply to the magistrate's question, dub themselves "medical students." I have, after an experience of many hundred students, satisfied myself that students are imbued with a love for their profession, a full sense of its responsibilities, and an ardent but discriminating admiration for its teachers. Still great amelioration in students' conduct and industry is gradually taking place within recent years, as has been indisputably proven in Dr. Temple Wright's most able and pleasant book on the subject.

The collegiate system we have sketched would curb that licence in speculation and conduct to which all youths are prone.

The Latin tongue expresses no greater falsehood than *ubi tres medici, ibi duo athei*, and as the writings of every physician refute it, nothing further than exposure is required here. When there is no time for the minister of religion to perform his sacred office, the physician may be called on to his take place. In a most eloquent address to medical students, Sir J. Kay-Shuttleworth, the great educationalist (formerly Dr. Kay), says: "When you come in age or in sickness to make up the great account of life, nothing will console you if you have been deaf to the great voice of humanity, or if you have closed your eyes to the sublime spiritual destiny of man."

It would be an admirable adjunct to the medical college

if a well-devised day and boarding school for classical, mathematical, and scientific education—such as would fit lads for the profession—were added. If the medical and preliminary college were conducted on a large scale by the amalgamation of, or at least the co-operation of some of the present schools, considerable profit would result, and there could be no better way in which it should be employed than in establishing free or low-rate scholarships for the sons of medical men. Such a plan would supplement most serviceably the work of the Medical Benevolent Fund. A few words about students' recreations. It is so important to train the physical as well as mental faculties, which are closely interdependent, and which in medical men should be in the highest vigour to resist contagious diseases, that I think a ball-court, a gymnasium, or if space permitted a cricket field, should be attached to every medical school. In Bartholomew's there is a competitive trial of athletic skill held annually, and prizes awarded. Students cannot work every hour in the day; it will be far better that the spare time should be spent in one of those places than in smoking at the dissecting room fires, or in the taverns to which want of occupation will tempt them. A monotonous walk, or the perusal of light literature in the library, is not sufficiently opposite to relieve the mind wearied with medical study. There will be more profit from such well-regulated work than if the exertions were strained in the one direction, as has been proved by the half-time system in factory schools. The cultivation of music and such refining arts should be also encouraged. For those whose means can afford it, one or two of the long vacations, or some months before settling down in practice, should be spent abroad. Travel gives a polish to the manners and an expansion to the understanding which can be acquired in no other way. Much may be moreover learned in a few weeks in such seats of medical science as London, Paris, or Vienna; and if the pre-

judices of the public must be pandered to, the doctor will be far more believed in for a short absence from home.

PROFESSIONAL EDUCATION.

The expenses of medical education are very moderate; for instance, about £90 pays for all lectures and hospitals needed for the diploma of the Dublin College of Surgeons, and the private instruction and books cost about £20 more. The expense in London is about one-third more. Although there should be abundant opportunities to enable the needy but industrious to enter the profession, too great cheapness of the education for it is an evil. In his evidence before the House of Commons, Sir A. Cooper, said "I know the consequence of gratuitous education. It has happened to me repeatedly to have an opportunity of introducing into the profession the sons of persons who were in a lower sphere of life. They have been generally bad sons and very bad subjects; they despise their parents; they will not mix with their family; and the system destroys the best feelings of the heart." If by talent and industry they could not conquer the disadvantage of poverty at the start, their parents should be content to put them to some humbler calling.

Apprenticeship is not necessary for obtaining the qualifications of the Royal College of Surgeons in Ireland since 1828. The old system was not without advantages; there is now a want of supervision which, as before stated, is very faulty, and a want of a friend to help at the start in life. In America, pupilage for three years with a recognised practitioner is obligatory, but two of these are passed at the college—a period quite too short.

As regards the age which should be attained before the study of medicine is commenced, it is hard to be precise, there being great variety as to the development

of the faculties in youths. I can see no objection to a student commencing at any age, when a full course of preliminary education had been completed and tested by examination. Sixteen or seventeen years may be accounted the normal age. It is most usual to begin at the winter session, but as then such a crowd of subjects rushes on the student, the summer is more advisable, as during that period he may be trained in chemistry and botany, which, as we have urged, are preliminary subjects. A period of four years is directed by nearly all licensing bodies, but as explicit arrangements are only laid down for three, and as then all the required certificates may be had, very many have obtained their diplomas in the latter time. Considering that there is frequently a pressing want of medical officers for the public services, any lengthening of this period is not advisable if absolute attendance for nine months during each of the three years was rigorously enforced. I am convinced from long experience that the industrious student in that time can acquire a sufficient knowledge of the principles of his profession; a long life of observation and study, daily continued, will alone teach him or render him a safe practitioner. No extension of the time of study will force information on the unwilling, thoughtless idler. The instruments of study, on all of which reliance is to be placed, and not on any exclusively, are as follows—1st, hospital attendance; 2nd, dissection, aided by demonstration; 3rd, lectures; and 4th, reading, assisted by tutorial instruction. Under each of these heads I shall offer some brief comment, and endeavour to exhibit their respective value.

Of paramount importance is the careful observation of cases of disease explained and demonstrated by the well-read and experienced clinical teacher. It is, however, certain that although knowledge of medicine and surgery is rather to be gained by the student's own industry and research, than by unaided teachings of the hospital me-

dical officer, however able, he must depend on those great instruments of knowledge, observation, analysis, and research, to train his mind to treat disease when he meets it without possibility of aid.

It has been urged that a theoretical knowledge of medicine and surgery should first be acquired, and then hospital attended. This advice is ill-considered, as such knowledge could not be gained without hospital attendance, which makes the acquisition of principles more easy and interesting, and gives a practical *cui bono* character to his work. The student should then commence clinical study his first, and not cease till his last day of pupilage. He should procure some clinical guide-book, such as that issued some years ago by the "Society of Observation," under the direction of Prof. Walshe and Dr. Ballard, of which a new edition, including the aids in diagnosis which the laryngoscope, sphygmograph, thermometer, and other recently applied instruments give, is much to be wished for. In the beginning some six cases of ordinary occurrence should be selected for observation, their history, symptoms, and treatment anxiously watched and carefully noted daily to their termination, either in cure or death. If the latter, the changes disease has wrought should be thoroughly investigated. To this course of study, the clinical teaching of the medical attendant and the student's attentive reading are indispensable aids in acquiring the *mens medica* which observation endows.

Some cases thus fully traced and understood will remain indelibly impressed throughout a whole life, affording many an opportune hint in similar instances. On the practice of careful note-taking, Sir B. Brodie in his Autobiography remarks: "These notes now form many thick quarto volumes of manuscripts, to which (even the earliest of them) I not unfrequently refer with advantage even at this advanced period of my professional life." He further expresses his opinion that by the practice alone will a student become a successful practitioner, or a con-

sultant to aid his brethren with satisfaction. The practice is, however, much neglected except by those preparing for competitive examinations, when it is insisted on. It may be unnecessary to dwell further on the fit mode of study in hospital, as under the head of practical examination in those institutions our doctrines can be most forcibly laid down, for it must be acknowledged that modes of examination completely control modes of teaching. Here, however, we may remark that clinical teachers should direct, and exercise by questioning, the student's faculties of observation, comparison, and judgment, rather than charge him with facts and theories by the spoon-feeding process so often adopted. Of all lectures the clinical can less afford to be read, or prosy—but is valueless if a superficial gossiping sketch. A comprehensive bed-card should, as in continental hospitals, be filled in for each patient, informing the pupils (while, for instance, they wait for an unpunctual teacher) of the striking facts of the case. It would save patients from the irritation of frequent questioning. The clinical teacher should also constantly urge on his pupils the necessity of regard for the interests and feelings of such patients as he may commit to their care or observation, and make them feel that they have duties to perform as important as his own, and that hospitals are specially dedicated to the solace of the careworn and sick. The largest hospital in the world, that of Vienna, has over its entrance the inscription *saluti et solatio ægrorum*. I feel proud to say that I have never known pupils forgetful of these duties, and sufferers feel usually most grateful to their dressers, and offer no objection to a crowd of sympathising learners.

The necessity of prolonged and constant hospital attendance is undoubted, but it has been heretofore regarded as the school-lecturer's province to exhibit the instruments and appliances the practitioner employs, and also the results of the morbid actions which may have

produced a fatal termination. It is argued that he can also dilate more fully on the principles of the science, and on each malady, out of his extended experience and reading than could be attempted in hospital. Many thoughtful men now assert that lectures are made to replace instead of aiding the observation of living patients, and that in the wards of an hospital alone a student becomes a physician, a surgeon, and an obstetrician. They therefore propose that the systematic lectures on medicine and surgery shall be given for the future in hospitals, and that schools should be reserved for the more theoretical subjects. The physical aids to diagnosis which new instruments have conferred will gradually make medicine and surgery more positive and practical, and thus more efficiently taught by the side of a patient than by any didactic address. And as long as medicine is uncertain, it will be advantageous that the student should not be puzzled by the varying principles of the physician who lectures to him at one place, and the physician whose practice he observes at another.

The principal characteristic of medical education in Dublin—namely, its practical nature, which has been attested by such disinterested witnesses as Sir B. Brodie, Prof. Gibson of Philadelphia, and Dr. Santesson of Stockholm—is due to the number and efficiency of its hospitals. It cannot be denied that opportunities abound for the study of general medicine and surgery, and also such departments as obstetrics, opthalmology, and insanity, in the completest manner. There are at present ten recognised hospitals, and, adding the midwifery institutions, about 1,200 beds are offered for the relief of the suffering poor and for the education of students, to whom they afford the advantages of proximity of schools, libraries, and the other resources of metropolitan life. As the funds are not fully adequate, there are probably 200 beds not occupied with patients. Sir D. Corrigan calculated the available hospital accommodation at 920

beds in 1854, but since then the Adelaide and Mater Misericordiæ have added at least 150. The population of Dublin being 254,808, there is available one bed for 254 individuals, but this statement requires qualification, for many of the patients, probably one-fourth, are admitted from the suburbs and provinces. It is undeniable too that the poorer persons bear a greater proportion to the wealthier in this than most other cities. The proportion of beds in hospitals to inhabitants is in London, 1 to 500; Edinburgh, 1 to 375; Glasgow, 1 to 580; and Paris, 1 to 167. The Dublin hospitals have been blamed as too small and too numerous; while it must be allowed with Dr. Stokes that there should be for clinical study at least as many beds as pupils, their distribution makes them the more available for sudden cases in every part of the city. As healthy sites can be always had at reasonable cost, there is no reason for removing Dublin hospitals to the suburbs, whereby patients and their friends, as well as officers and their pupils, would be much inconvenienced. However, to the establishment of homes or sanitoria no objection can be urged, for convalescence is hastened, and the number of acute cases which can be aided by a given number of beds much augmented. The rare and remarkable cases and autopsies—hydrophobia, tetanus, cerebrospinal meningitis, for example—and operations, are open in any hospital to the pupils of the others. It would be desirable, if feasible, that the classes of hospitals closely placed should have reciprocal advantages, the instruction being given at hours which did not clash. Every hospital in Paris is open to every student of medicine. In large London and continental hospitals with crowds of pupils, such as Bartholomew's or Hotel Dieu, a student has to pass many beds in order to secure a place at one where he can see and hear; and in Vienna, by Rosas, Jäger, &c., only a few cases are selected for one day's *clinique*. The division of the class among each of the teachers for three months would

arrange this difficulty. But such popular teachers as Hughes Bennett, Oppolzer, and Frerichs, are followed often by 100 students, patients able to be removed from bed being examined usually in the theatre. It is certainly advantageous to the student to have every form of disease in the same building, inasmuch as it saves his time; but the practice of mingling cases of contagious diseases, adopted so much in the London hospitals, is fraught with great peril to pupils and to patients, as the statistics of Dublin hospitals indisputably show. In one of the best London hospitals 167 fever cases were admitted in 1862, and 13 attendants caught the contagion. As regards fever, an opportunity could be afforded of study in a great establishment wholly devoted to that class of maladies in this city, where now no pupils attend, although the board of hospitals so advised in 1858. It seems incumbent on every fever hospital that special vehicles should be provided, and also means for the disinfection of not only the clothes which the patients bring on them, but their bed-clothes and bedding. Without such precautions the supporters of fever hospitals are only imitating the task of Sysiphus. It has been proved that air heated to 300° is the only effectual mode of disinfection. In many of the Dublin hospitals, libraries and museums for further instruction are wisely added. Books for patients would be readily had by asking a few gentlemen who wish to thin their libraries; and if boxes were placed at railway termini, newspapers would flow in. All possess *post-mortem* houses, where the pupils study the results of disease while the remembrance of the symptoms is fresh in their minds. These buildings should be more comfortable than they generally are, so that this important study may be encouraged. The antipathy to *post mortems* among the poor produces great loss to science, and should be reasoned away. The office of pathologist should be conferred, with some moderate salary, on a zealous man for a few years, his whole time

being devoted to it. In Dublin, without amalgamation of hospitals, this could not be afforded. Rokitansky devotes his whole time to the dead-house of the Vienna hospital, with what results I need not say. The opening of resident offices gratuitously, or even in some with remuneration, to the most deserving pupils in the matters of knowledge, propriety, and industry, cannot but afford a salutary stimulus to exertion. In some American hospitals every third-years student is obliged to reside, and act as dresser for at least one week under direction of the house surgeon; and if a somewhat similar plan were adopted with us the production of good practical surgeons would be greatly fostered. If the officers of the larger hospitals were to give notice of operations or interesting cases and autopsies in the medical journals, great advantage to the junior practitioners or strangers would accrue.

For want of space the important subject of hospital hygiene cannot be dwelt on here, but it must be acknowledged that public opinion, stimulated by the statement and addresses of many famous medical men, is gradually tending to the belief that hospitals are injudicious and old-fashioned institutions, and that a well-organised system of home treatment is more calculated to aid the sick and at a lesser expense. Hospitals built twenty years ago are termed dangerous for treating surgical accidents, and the demolition of those in which pyæmia has arisen is called for. It is therefore all-important for the interests of humanity, as well as for the present system of medical education, that this problem should be set at rest by the collection of reliable statistics and other data on the subject; and if the government cannot be induced to establish such an inquiry, the profession itself should take the initiative. All hospitals would gladly give facilities, and the surplus funds of the British Medical Association would be well spent in bearing the expenses of at least some dozen

commissioners, who would conduct the inquiry in an exhaustive and disinterested way. Besides the definite question of hygienic construction, the site, class of cases, and methods of selecting them and recording their character and results, should be considered, so that the inquiry would be both difficult and prolonged. It is a positive truth that the poor in hospital have better advice than their wealthy brethren, for they are attended by the most eminent men assiduously, as any want of skill or care would be detected by colleagues or pupils. The main impulse given in this city to improved hospital ventilation was the exposure in 1809, by Carmichael, of the mortality and delicacy of the children in the House of Industry, St. Thomas's and Bethesda schools, owing to want of pure air. The council of the London College of Surgeons influenced the matter strongly by refusing to recognise hospitals which did not give 1,000 cubic feet of space to every patient.

The hospitals of London have been endowed with a munificence worthy of the citizens of that greatest of capitals. The most ancient Bartholomew's, has 650 beds open for those who need them, without recommendation. In the new wards of another, Guy's, each patient has 2,000 cubic feet, the greatest space allowed in any British hospital. The richest of them, St. Thomas's, is about to be rebuilt opposite to the Houses of Parliament at a cost of £360,000. Mr. Morley, at one time a medical student, but afterwards a hotel proprietor, bequeathed £150,000 to St. George's hospital, besides many other sums to medical charities. Their great size renders it difficult or impossible to close them if contagion spreads within them. The practice of paying the clinical visit at twelve or one in the day is injurious, by encouraging the lie-a-bed pupils; and as private engagements will encroach on such hours, the teachers must hurry through the wards. The Irish and Continental hour of nine A.M. is therefore preferable. Physiological

principles also teach that patients are then best able to bear pupils' examinations and operations. The officers are usually paid only by pupils' fees. In the Paris and most other continental hospitals, a small salary, about £60 a-year, is given to each attendant. The great fault of their elective system is slowness of promotion; thus, Abernethy was kept in the subordinate position of assistant-surgeon for twenty-eight years. Many of them have now a rule by which the surgeons must retire on the attainment of sixty-five years; they then should become consulting surgeons, with a proper emolument as reward for past services. The generous nature of Carmichael prompted him to make way for a deserving junior in the Richmond Hospital when he was but fifty-seven years of age; and shortly after, on leaving the President's chair at the College of Surgeons for the third time, to encourage rising practitioners he confined his practice to house patients, or consultations outside with other practitioners.

The hospitals and dispensaries of London are so largely used by persons whose circumstances demand that they should pay for medical aid, that it has been proposed to make them provident or self-supporting institutions for all who could not give clear evidence of pauperism. By such perversion of these *charities* much wrong is done to the general practitioner. It does not appear that in Dublin similar frauds exist, for there, indeed, the proportion of poor inhabitants is so great, that the hospitals can be readily filled with deserving objects of charity. The Richmond, Whitworth, and Hardwicke hospitals are supported solely by government, and directed by a board which it nominates. The hospitals which are partly supported out of public funds are, Dr. Stevens', the Meath, the Lock, Cork-street Fever, the Rotundo and Coombe Lying-in, St. Mark's Ophthalmic, and the Incurables hospitals. All these are superintended by a board of twelve members (of whom about

one-third are medical) appointed by the Lord Lieutenant, to whom they annually report on the duties of officers and the general management of the institutions. The annual grant amounts, for the year ending the 31st of March, 1865 (no later accounts have been published), to £15,722 15s. 9d. distributed as follows—Lock, £2,600; Stevens', £1,300; Meath, £600; Cork-street, £2,500; Richmond, &c., £7,472 15s. 9d.; Rotundo, £700; Coombe, £200; Incurables, £250; St. Mark's, £100. The parliamentary committee reported that it was just these hospitals should be supported, as the poor of Dublin were deprived of hospital endowments by the subversion of monasteries at the Reformation, and such funds were restored elsewhere—Bartholomew's and St. Thomas's in London, for instance. The consolidation of the hospitals, and the distribution of the grant among all, have often been urged; two are so ill-built that they should be remodelled, and another should be Christened (more than a change of name being implied by that word).

A few particulars about each of the Dublin hospitals may be noted, and we take them in alphabetical order. Adelaide—100 beds, 2 physicians, 4 surgeons; voluntary contributions. Patients exclusively Protestant. The only other hospital, as far as we are aware, in which religion is the test for admission is the Augsburg hospital, which was endowed for the benefit of Catholics and Protestants; but dissension arising, it has been halved between them, separate administrations and consequent expense being involved.

City of Dublin—104 beds (instead of 50, as stated in Oppert's Treatise on Hospitals), 2 physicians, 5 surgeons. Established in 1832 by professors of the College of Surgeons; voluntary contributions, and £300 yearly from Corporation.

Dr. Stevens' hospital—250 beds, 2 physicians, 3 surgeons; endowed in 1720 by Dr. Stevens, and £1,300

yearly from government grant. The only hospital in Dublin which has a school directly attached. The class was thereby increased, for while the pupils in 1855 and 1856 were 11 and 23 respectively, they numbered 61 in 1857.

Jervis-street hospital—60 beds, 2 physicians, 7 surgeons; the oldest in the city (1721), now directed by Sisters of Mercy; £200 grant from Corporation.

Mater Misericordiæ—100 beds, 2 physicians, 4 surgeons; built in 1861; it comprises every hygienic requisite; £300 grant from Corporation and subscriptions. Directed by Sisters of Mercy.

Meath hospital—120 beds, 2 physicians, 6 surgeons (1753); county grant, £600 from hospitals grant, £300 yearly from Corporation and contributions. Famed as clinical school.

Mercer's—66 beds, 2 physicians, 4 surgeons (1734). Endowment from Corporation of £300, and contributions. If funds permitted, reconstruction is much called for.

Richmond Surgical, Whitworth Medical, and Hardwicke fever hospitals—312 beds, 4 physicians, 4 surgeons, the number having been reduced from 5 in 1864 without sufficient reason; wholly supported by government. The museum contains 4,000 objects of extreme value. The Richmond was most ill-constructed, but new wards were opened in February, 1866. The hospitals receive about £7,472 from government yearly.

St. Vincent's—100 beds, 4 clinical teachers (1834), Directed by Sisters of Charity; £300 from Corporation, and contributions. Possesses a sanatorium of 20 beds at Stillorgan.

Sir P. Dun's—100 beds; 3 physicians, 3 surgeons. Endowed by Sir P. Dun, M.D. Directed by School of Physic.

The Coombe receives £520, the Incurables £200, and St. Mark's Ophthalmic £100, from city funds, making a total of £2,520 to the hospitals.

In Scotland, the largest hospital is in Glasgow, 600 beds; and next is the Edinburgh, 500 beds, admitting all diseases, but in five distinct buildings. The Aberdeen infirmary has 300 beds, but only half of them are usually occupied.

The Paris hospitals are remarkable for having 563 baths, which even out-patients use, so that 1,200 baths are often given at St. Louis in a day.

The county hospitals of England are faulty, from the distance which patients must travel and the difficulty of admission to many persons ill with an acute disease, the beds being filled with chronic cases which governors have forced in. The wealthy are most generous to them, and Dr. Chadwick last month bestowed £12,000 on the medical charities of his town, Bolton. In moderate-sized towns there should be only one hospital, and the smaller ones, and even the dispensaries, could be readily amalgamated with it. For such reasons the establishment of small hospitals in villages has been warmly supported.

Sir J. Simpson, in his address to the Social Science Congress at Belfast, argued that mortality in lying-in-hospitals was many times greater than among parturient women at their homes, in the proportion of 29 and 212. The same argument has been often quoted, but it is forgotten that much more severe cases are treated in the former situation, and that the statistics of home practice or extern maternities are very imperfect, and that we may hear of unsuccessful cases with no great certainty. Very many women's lives are saved in hospitals which, from want of attendance and nourishment, would be lost in their wretched abodes, as can be, in regard to difficult cases, amply demonstrated by statistics. It cannot be doubted that the students of maternity charities, called during the night through the purlieus of a city to cases they do not usually revisit, afford imperfect aid to the patients, and scarcely improve themselves in the obstetric art.

Dr. E. Kennedy lately advocated the removal of the Rotundo Hospital to some thirty cottages to be built in Rutland-square. These cottages should not be made of iron, as Sir J. Simpson recommended, as such are, from the want of porosity, most unwholesome. Owing to financial reasons, the project met with little support. The master's receipts for pupils, which exceed £1,000 yearly, it was proposed to reduce. This great hospital, like those of Dr. Stevens, the Lock, and Sir Patrick Dun, was established by a medical man, and Dr. Mosse devoted the energies of his life—or indeed life itself, for, worn out by anxiety, he sank at the age of forty-seven. The Lying-in Hospital was located first in South George-street in 1745. It afterwards afforded the most notable instance ever adduced of the efficacy of ventilation in lowering mortality; and by watchful efforts to ensure a free supply of air through the building, the destroyer of puerperal fever, it will continue to be esteemed as one of the noblest charitable institutions of Europe. One-seventh of the children born in Dublin are delivered in it.

But those able to pay for attendance at home should be excluded, especially if it proved that the applications are more numerous than the number which can be admitted with safety. Mr. Phelan has published a table, from which it appears that while 1 in every 6 children died during the first four masterships, on the average but 1 in 119 died during the 12th, 13th, and 14th of such periods. If poor lying-in women be received into an hospital were no surgical patients are treated, and where the women are cared in small, yet roomy and never overcrowded wards, with a nurse for only a few, they must surely be placed under circumstances more favourable to recovery than if they lay in the squalid and unwholesome rooms from which they come. If this be so, the question of relative expense should never be considered. Small wards are desirable, as thus, should a puer-

peral fever case arise, the danger is lessened, and if operative steps are needed in one case, but a small number of women are depressed—and during the parturient period the psychical state is morbidly impressionable. The excessive mortality in the Vienna Lying-in Hospital was proved to depend on inoculation with cadaveric matter from the hands of anatomical students, and this with similar instances affords reasons why obstetric practitioners should not follow anatomical pursuits, or even undertake surgical operations.

While it is desirable that there should be separate wards for children, as at St. Vincent's, Meath, and Adelaide in this city, hospitals for children alone seem wholly unnecessary.

The practice of getting up little special hospitals by the friends of medical men appears to be nearly two centuries, and for it is exposed in Smollett's novels; *but* it has now nearly come to its end in London by the determination of hospital authorities to found special departments of their institutions. In 1687 the College of Physicians strove to suppress it by voting that everyone of its body should prescribe gratis for the poor; but so great was the difficulty of paying for the medicine, that the prescriptions were usually cast away outside the doctor's door. Special hospitals should be discouraged, as no one who limits himself to the study of one branch of pathology can have a comprehensive knowledge of other maladies incident to it, as they would deprive ordinary hospital students of opportunities of learning these diseases, and as they entail useless expense on the benevolent by multiplying buildings and officers for the charities.

The Contagious Diseases Acts (1864 and 1866) were passed for the prevention of syphilis among soldiers and sailors at a few stations—Aldershot, Plymouth, Curragh, and Queenstown, for example. If there be reason to suppose that a woman is a prostitute and is diseased,

she may be forced to submit to examination by a surgeon, and to go to hospital if she be suffering from venereal. It is reported that great diminution of these diseases has resulted—in Plymouth to one-twentieth of their former extent, and many unfortunates have been reclaimed. For these reasons a most influential association has been formed for procuring the extension of these acts to civil populations. In London, Messrs. Curgenven and Berkeley Hill, and in Dublin, Mr. Labatt, act as secretaries. The main difficulty which the project will have to encounter is the want of hospital accommodation and the expense of providing it, which have heretofore prevented the government extending the benefits of the Act to all military and naval stations. At the Curragh no hospital was available, but the authorities have procured a site, having been probably urged by the exposure of the evils of prostitution among the "wrens of the Curragh." The Venereal Diseases' Commission, the International Congress at Paris, 1867, and the Harveian Society, have all advocated the expediency of these repressive measures. The latter body recommended a registration of prostitutes for the use of the authorities, but not to be in any way accessible to the public.

The evils of admitting degraded females into general hospitals and workhouses were fearfully exemplified during the partial closure of the Westmoreland Lock Hospital a few years ago.

The number of Lock Hospitals should be increased, a result which will flow from the Contagious Diseases Act. Dr. Percival eloquently described the benefits of such an institution: "It provides relief for a painful and loathsome distemper, which contaminates in its progress the innocent as well as the guilty, and extends its baneful influence to future generations. It restores to virtue and to religion those votaries whom pleasure has seduced or villany betrayed, and who now feel by

sad experience that ruin, misery, and disgrace are the wages of sin."

While female virtue is so general, it must be acknowledged that prostitution is marked by greater effrontery in Dublin than in most cities, and it is incumbent on the local authorities to exclude from the most public thoroughfares—at least during the day, when virtuous females are offended—women whom dress, paint, and gesture proclaim to be prostitutes. Military authorities, and those charged with the education of young men, should severely punish any of those under their care who were guilty of offensive lewdness or seduction. It may be here noted that some investigations lately made in Edinburgh completely acquitted the students of medicine of the detestable crime just named.

HOSPITAL AND SCHOOL ELECTIONS.

The modes of election to hospitals and medical schools are almost as various as they themselves are; and, although from the pure motives of those to whom they have been entrusted, they have frequently worked well, yet much improvement is possible. The methods of election followed, for instance, in this city, are—First, by existing medical officers, as in at least three hospitals and several medical schools. This is open to the objection of excluding all but relatives of the electors or former pupils of such institutions. Second, by board of governors appointed by the Lord Lieutenant, as in one hospital until lately directly governmental, or elected from subscribers (who should have been so for some fixed period previously, as otherwise it is open to grave objections). This is followed by three hospitals and a school in this city, and it is, with some precautions, a safe method, and the one invariably followed in London. Third, by the governing body of licensing institutions, as is the case in one hospital and two schools of medicine. No mode could be more un-

exceptionable, if stringent declarations are enforced to prevent favour or affection. And, fourth, by the choice of religious orders, under the suggestion of the medical officers and direction of the Church. In two of such hospitals, different from most others, the appointment does not procure money for the predecessor or the charity.

It has been lately alleged that sectarian considerations influence hospital elections in this city. Of 12 recognised hospitals (10 general and 2 midwifery), 2 are exclusively officered by the members of one religion, and 5 by those of another. Of all these hospital officers, over three-fourths belong to one persuasion, which holds a still higher proportion among the fellows of the Colleges of Physicians and Surgeons, a position usually required to qualify for hospital appointments. Now, these fellowships are granted without any religious distinction whatever, and it is the fault of the members of the other persuasion if they do not take them. Doubtless, the restrictions which have been heretofore placed in the way of Roman Catholics for obtaining university education have limited the number who could qualify for the highest professional rank; but, in spite of them, the number of gentlemen of this faith who hold hospital offices is every day increasing. Some other circumstances beyond religious exclusion have probably contributed to this unequal sharing of first places among the two persuasions; for instance, ascendancy alone could not account for the fact, that no Roman Catholic surgeon in this city has qualified himself for the speciality of an oculist, while seven Protestants have done so. If there be religious exclusion, however, it is the directors, not the medical officers, who are to blame for it, as there is no body of men so free from bigotry as our profession. When vacancies occur in those hospitals supported by public grants, the electors would act most unfairly if they allowed a candidate's religion to bias them. But it must

be remembered that in at least four of the hospitals, appointments are got by purchase, the price current now ranging from £400 to £1,200; and Catholics may not be able to afford these sums, or they can obtain greater bargains at hospitals where those of their creed are readily accepted. In one hospital, the medical officers obtained the right of nominating colleagues by the relinquishment of £100 a-year, the sum voted for their payment. This undoubtedly encourages nepotism, a system under which men like Dupuytren, Velpeau, and Jobert, who rose to the first places from the very humblest positions, would never have had opportunities. In the hospital alluded to, it cannot be denied that worthy officers have been universally appointed; but those who are not thus born to surgeoncies have little chance. This was disapproved of by the parliamentary committee (1854) on the Dublin hospitals; and a subsequent royal commissioner hinted that the privilege was turned to very profitable account. It is however stated that the surgeoncy to this hospital was never sold. In another hospital, in which by Act of Parliament the medical officers elect, a sum was lately given for a place which only ten years of pupils' fees could repay.

The election to medical officerships of important public institutions should certainly not be left in the hands of clerics, lawyers, or town-councillors, for professional merit will seldom weigh much, such electors not having discrimination regarding the relative merits of candidates. Hence it is much to be wondered at that the practice of leaving the selection of Edinburgh University professors to the town council has not been abolished. It was made notorious so long ago as 1751, by the election of one Mr. Clow to the chair of logic, David Hume and Edmund Burke having been the other candidates; and in regard to medicine, many analogous instances might be cited. A system of nomination by such authorities as the President of the Colleges of

Physicians and Surgeons would be most desirable and feasible. The election to the Linacre professorship of physiology is made in a very commendable way, the electors being the visitor and warden of Merton College (the last-named position Harvey filled in 1646) and the Presidents of the Colleges of Physicians and Surgeons, and of the Royal Society.

The governments in France and Austria direct the hospitals, which are admirably managed. The great Vienna hospital, for instance, has several grades of medical officers—first extern; after a year intern at £24 a year; then secundär physician for four years, when he leaves if not selected as primär or clinical physician. The latter offices are well salaried. Its income by patients (for most of them pay) and donations is £54,000 yearly. The number of resident medical officers is seventy-six. This great institution, as well as all the educational establishments of Austria, are most fully described in Sir W. Wilde's work on the subject.

The most senior physicians and surgeons retain their offices usually in Dublin; but in London, at sixty-five retirement is compulsory, the office of consultant being offered to the retiring gentleman. This is a better plan than the system of serving for ten years only, as at Edinburgh, and for seven, as at Sir P. Dun's until last year, when the offices were made permanent by an Act.

The conviction has gradually forced itself on my mind that the competitive principle—which is growing every day, and substituting manly self-reliance for cringing place-hunting—might be applied in determining the relative fitness for junior appointments—assistant physiciancies and assistant surgeoncies. The importance of selecting the best qualified for such posts cannot be over estimated. It has been said that the vital interests of electors in self-supporting institutions will urge them to select the man in their judgment best qualified

to serve the establishment, irrespective of all other considerations. But it is not easy, even for the best intentioned, to form a just opinion of the relative qualifications of candidates by mere recommendatory testimonials or even antecedents; and as it is human to err, how can it be insured that favour or other interested motives will not influence electors, to the exclusion of actual merit? It may likewise place in the hands of the unworthy the power of refusing more competent rivals. The method by concours, adopted in France and Germany, might be applied in a modified form to many institutions in this country. In France, when a vacancy amongst the adjunct officers occurs, graduates are freely invited by a six months' notice by the special government board, which in every point directs the hospitals, to compete, and a jury is formed out of the professorial staff, with the addition of members of the Academy of Medicine, independent members of the profession. The professional public is admitted to the theatre, and each candidate having submitted his claims, writings, and evidence of having lectured (which is indispensable), writes an essay, and then delivers a lecture on a subject chosen by lot and for preparing which three hours in a closed room are allowed. Each member of the jury has given in a subject. They are also called on to defend theses previously written by them, and each aspirant has to make dissections, perform surgical operations, examine and prescribe for patients, or undergo some other practical test depending on the nature of the chair which is vacant. There can be no doubt that this method may not exclude those who are deficient in moral attributes, though sufficiently informed, and possessing that facility of expression and impressiveness of address which a lecturer must have. But how much more likely are such to creep in under the testimonial, interest, or purchase system. To render, then, this method more unexceptionable I would advise that the

electors for hospital appointments should each nominate a candidate having regard to his mental and physical endowments and moral character, and thus there would be no difficulty in refusing any undesirable person; still the man of retiring modesty who, under the canvassing system has no chance, might succeed by force of brains. A competitive trial somewhat like the "concours," but well-devised and practical, would then decide the appointment. The precedents of the public services and some high places in the universities being thus decided, can be adduced. It is stated in a biography of Prof. A. S. Taylor, that he obtained his chair of medical jurisprudence at Guy's hospital in 1830 by the giving of six probationary lectures, and thus the electors selected the greatest master of the subject who has ever lived. The system of promotion by merit is one of the greatest triumphs progress has to boast of during the present century, as the opening of 40,000 offices to the truly deserving has had the most salutary effect in encouraging education. Many evils and errors in state departments, due to the ill-suited officers obtained by former means, have been corrected since appointment by merit has been in force.

The competitive examinations for the army and navy services have benefited medical education, for those who have students under observation must have remarked an increase in their zeal and industry from the beginning, which is found to be absolutely necessary to obtain places. These services will soon become filled with thoroughly efficient and well-informed officers, the more so if good literary education is insisted on.

LECTURES.

Lectures have often been decried, but most unjustly—it has been their abuse and not use which has been injurious. The relative value of professorial and tutorial instruction have been often controverted, but

each has its place and power, and it is impolitic to adopt one exclusively. While the old-fashioned essay-reading will never please pupils, who know the books in which they can more readily get up the matter or even the words of such addresses, no method of learning can be more useful or agreeable than the impressive discourse of one thoroughly accustomed to teaching, and who, an entire master of his subject, can yet render his meaning intelligible to the least-informed of his audience. The courses on each subject should be progressive, and as this would double the lecturer's labour, there is a strong argument for amalgamation of schools to make lectureships fairly remunerative. He can call to aid diagrams, models, experiments, microscopic and other preparations to illustrate his teachings; but too many diagrams or specimens are confusing. Paris lecturers seldom use plates or drawings. By critically examining the authorities of his subject and contemporary literature, an amount of erudition as well as practical experience otherwise unattainable can be offered to the student. The good practice of note-taking, in a brief and accurate though digested form, has been lately said to give only an inconvenient edition of some treatise on the subject; but it is the practice of writing and condensing, not the facts, which usefully exercises the mind. These lecture-room or hospital notes should be revised and expanded each evening, or they are of little use. Students should be taught practically by the lecturers on physiology, chemistry, or pharmacy, for looking at a carefully prepared microscopic slide, a carefully tested experiment, or elegant mixture is not one-fourth as instructive as the efforts to do these things for himself would be to a student. Dr. Johnson used to say he could see no use in lectures unless there was something to be demonstrated—even lectures on the making of shoes—but all medical subjects can be taught in the practical manner. The want of clearness under which

Hunter certainly laboured as a lecturer, and the want of ability to appreciate him among his contemporaries, may have caused that otherwise inexplicable fact, that the audience of that greatest of physiologists and pathologists never numbered twenty. The evidence of a great Oxford professor on the power of lectures, although applied to another class of subjects, may not be inappropriate here: "The type is a poor substitute for the human voice. It has no means of arousing, moderating, or adjusting the attention. It has no emphasis but italics, and this meagre notation cannot adjust itself to the need of the occasion; it cannot in this way mark the heed which should be specially and chiefly given to peculiar passages or words. It has no variety of manner or intonation to show by their changes how the words are to be accepted, or what comparative importance is to be attached to them. It has no natural music to take the ear like the human voice—it carries with it no human eye to range, and to rivet the student when on the verge of truancy, and to command his intellectual activity by an appeal to the courtesies of life. Half the symbolism of a living language is thus lost when committed to paper, and that symbolism is the very means by which the forces of the hearer's mind can be best economised or most pleasantly excited. The lecture, on the other hand, as delivered possesses all those instruments to win and hold and to harmonise the attention, and, above all, it imparts to the whole teaching a human character which the printed book can never do. The professor is the science or subject vitalized or humanized in the student's presence. He sees him kindle in his subject—he sees reflected and exhibited in him, his manner, his earnestness, the general power of the science to engage, to delight, and absorb a human intelligence. His natural sympathy and admiration attract or impel his tastes, or feelings, or wishes for the moment into the same current of feeling,

and his mind is naturally, and rapidly, and insensibly strung and attuned to the strain of truth which is offered to him."

Let me cite two more instances of brilliant teachers of our science. Hear Arnott on Sir C. Bell: "Still more eminent was he as a teacher of anatomy. In the lecture-room he was almost without a rival; his views were nearly always solid and always ingenious, while his manner and language enchained the attention of his audience. Dull, indeed, must have been the student who would have slumbered while Charles Bell was in the professorial chair. In his hands dry bones lived again, imagination investing them with the textures which had once clothed them. A muscle was no longer a mere bundle of fibres arising here, inserted there; it was a guide to some important operation for the surgeon's knife, or kindling with hidden fire, betrayed by the anatomy of its expression the emotions that lurked within; and the flaccid artery on the table spouted forth its crimson stream, and demanded the arresting hand of the skilful surgeon, or threatened death as the alternative. In short Sir C. Bell made his pupils think, and interesting as anatomy is as a branch of natural history, he taught them to value it most of all as a guide to the healing art." Of the great Wm. Hunter, Brodie speaks: "He is reported to have been at once simple and profound; minute in his anatomical demonstrations, yet the very reverse of dry and tedious. Subjects which were uninteresting in themselves, were rendered interesting by the liveliness of his descriptions, and the more important points were illustrated by the relation of cases and the introduction of appropriate anecdotes, which, while they relieved the painful effort of attention, served to impress his lessons on the mind in such a manner that they could never be effaced. The tendency of his lectures must have been to improve his pupils with respect to their moral qualities, fully as much as with respect to

their professional attainments." Lectures since the days of Harvey and Lower, who had royal hearers, have done much to elevate our science in public estimation.

Sufficient supervision of lecturers is not made by licensing bodies, as incapable instructors are a great evil and tend to cast this admirable method of education into disrepute. It is certainly carrying the free-trade principle, advocated in medicine in the famous letter of Adam Smith to Cullen, too far to allow every one to teach. It is scarcely one in a hundred of those fully informed who have that aptitude and perspicuity of expression, that versatility of manner and industry in procuring illustrations which successful teaching requires. The teacher must not only pour out knowledge, but he must pour it into his pupils. Too great rapidity overstrains the attention, and subsequent fatigue renders learning impossible.

The late Professor Macartney was in favour of licensing lecturers only after they had given three year's notice of their intention, and could prove their capability at a kind of concursus. When a professorship is vacant it would be desirable that candidates should send in a syllabus specifying in detail each day's lecture and the means he possessed for its illustration, and the governing body should see that the successful one adhered to it. Such is far more trustworthy than a book of testimonials. The annual publication of the corrected syllabus would be useful to the students, especially if they distinguished the "pass," or more essential, from the "honor" subjects. A synopsis on the black board of each day's business has been also found useful—if pupils will not copy it before lecture, and depart rejoicing that they have gained an hour, or rather forty-five minutes, for to such a duration the academical hour has been by common consent reduced. The lecturer should spend a few minutes at the beginning of each lecture in examining his pupils on the topics he dwelt on the previous day, as

attention is increased, the reading of the subject encouraged, and the new matter is suitably introduced. A weekly examination is not nearly so useful and is not largely attended. A recapitulation by the lecturer is often tiresome, especially if it be a pet subject of his. The examination at once on the conclusion of the lecture would leave no time for the reflection or study of the pupils, who often make most pertinent and novel observations. The precedence of the radial pulse over the heart's second sound was first noted by Mr. Colt, a pupil conversing with Mr. Paget after he had lectured on the subject.

Such examinations and conversation in the chemical or physiological laboratory are very useful in preserving an intimacy between professor and pupil, which has heretofore been sadly wanting in medical teaching. A useful way of ascertaining the presence in the city of all the pupils (for such is often doubtful), and of forcing them to learn, would be to hold compulsory monthly examinations, and a candidate who failed in a majority of them should be refused a certificate.

ANATOMY.

I shall now dwell more in detail on the various branches of knowledge which must occupy the student's attention. Of all the subjects taught in medical schools, anatomy has been usually counted the most important. The practice of medicine and surgery require constant reference to the normal state of the human body. The operator would plunge his knife into situations where vital parts abound, with a certainty of accomplishing his patient's destruction, were he not a practised anatomist, and the physician would seek in vain to discover the seat of ailments were he not perfectly acquainted with the normal position, sounds, motions, or other phenomena which distinguish the organs; or, as Dr. Hope quaintly expresses it, "a physician looking at his

patient must in imagination turn him inside out." This knowledge is manifestly to be acquired from the dead body. We may, therefore, rejoice at the wise unprejudiced laws which afford now such abundant opportunities of dissecting.

Dissection is the third great element in medical and surgical education, and its necessity has never been questioned. The opportunities which are now possessed by students are most abundant, as science has gradually overcome prejudice existing against dissecting the human body since the days of Erasistratus and Herophilus, who first did so. Dissection was first legalized by Henry VIII. in 1540, in a very limited way; and an act passed in the twenty-seventh year of Elizabeth's reign gives the bodies of four executed criminals for that purpose annually. Even within this century popular prejudice ran so high, and diminished so injuriously facilities for dissection, that the illustrious Professor Macartney bequeathed his body for dissection. Under the Anatomy Act, 1832, an inspector of anatomy is appointed for London, the provinces, Ireland, and Scotland. From the poorhouses in Dublin an abundant supply is obtained, which might be supplemented by the unclaimed bodies on which inquests are held. The pauperism which is unfortunately so extensive produces at least this good. The subjects are preserved by injecting through the arteries chloride of zinc, or some other chemical—a secret in some schools—and then these vessels are filled with wax and red lead. In Dublin formerly a body was apportioned to six students, two for the head and neck, two for the chest and arms, and two for the abdomen and legs; but twelve are now accommodated by the sub-apportionment of these parts. In London eight dissect the same body, the head, neck, and chest being the very disproportionate gift to two students. It is by this method of gaining knowledge that one can see, feel, minutely examine, and

thoroughly understand the regions and organs wherein reside the morbid actions which the professor of the healing art is called on to combat. Thus alone can he comprehend and remember the complicated relations of so many parts crowded together in so small but so intricate a space as the human body; thus is acquired that familiarity with the places in which operations are conducted, and that facility in the use of instruments so essential to their performance. No book knowledge can ever be a substitute. Mr. Guthrie, so many years a member of the Court of Examiners in the London College of Surgeons, used to speak of a candidate who most eloquently described the biceps, yet when shown that familiar muscle he did not recognise it. Is not such a strong argument for a practical method of examination? Above all important is an intimate knowledge of the bones, as they constitute much of the surgeon's care, and without it other anatomical parts cannot be studied with advantage. This knowledge is best gained by reading a description, with the bone in the student's hand. Vesalius used to say, an anatomist should be able to recognise every bone and their important points even when blindfolded. Lord Bacon's advice that a student should thoroughly learn a part or a single disease before attempting the study of another was most sagacious.

With this foundation dissection of the soft parts can be pursued, the skeleton, however, being still constantly referred to. As dissection is doubtless difficult, and anatomical nomenclature imperfect and varied by every book and teacher, the assistance of demonstrators, to teach the method of displaying the relations of the various parts, is indispensable, as otherwise the student's attempts would be mere mangling. Reliance, however, is to be placed by the student on no one save himself. Lectures on the subject must not be underrated, as without them indeed a student's first essays would be fruitless, for in

the theatre the organs and regions, with the best methods of displaying them, are exhibited by one thoroughly accustomed to communicate knowledge. Besides, various practical facts derived from the lecturer's experience or reading are mentioned, and specimens of abnormal and developmental varieties are demonstrated, which cannot fail to make this a most certain as well as agreeable method of instruction. Weights and measures for determining these data of organs and parts, and handy microscopes, should be available in every dissecting room, else abnormalities will not be recognised in *post-mortems* afterwards. By thus exercising every faculty and sense in learning a part, the facts will be fixed on the memory.

Harvey, the Hunters, Liston, and other great lights of the surgical profession, owed all their success to their knowledge of anatomy; and Sir A. Cooper boasted that even in the zenith of his practice he never passed a day "without dissecting some part of the human body." Lawrence well illustrates the superiority of anatomical knowledge gained by dissection to that which is theoretical, by comparing it to the knowledge of a traveller who has seen a place, which is clearly more exact than that of him who has merely read a written description. So important is anatomy, that nearly all the great men of our profession attained excellence by its pursuit, yet it is a common thing on the part of those who get into practice by the touting and toadying plan, to decry the demonstrator or teacher of anatomy. The examples of the Hunters, Baillie, Cooper, Brodie, Colles, Crampton, Cusack, Adams, Hargrave, Power, Mayne, and many others, might be readily adduced to abash such detractors.

In all the continental and many of the London schools there is a special professor of pathological anatomy, whose labours are confined to the *post-mortem* room. This is not wise, for morbid anatomy without the history of the

disease is very useless. As Sir D. Corrigan has said, an architect could ill judge of an intricate building by examining the ruin. The inspection of the body should be made by the physician who has treated the disease. General pathology is, however, somewhat neglected in Dublin. Where there are two professors of medicine or surgery, one should adopt his part of pathology, leaving the practical division to his colleague. As it is so hard to draw the line between the normal and abnormal in such subjects as cell-growth, the constituents of the blood, urine, &c., perhaps general pathology might be added to the physiological chair. Some one of those teachers should establish a laboratory in which morbid products should be examined microscopically and chemically, and the leading practitioners of the city could indirectly contribute to its support.

PHYSIOLOGY.

Physiology, or the science of life, yields to none in interest or importance, for while it tends above all to improve and render positive the healing art, it informs the public on the means for preserving health and consequent happiness. It explains the wondrous mechanism of the actions by which life is carried on, and the derangements which it is the province of medicine to investigate. This subject must be approached with some preliminary knowledge of chemistry, of physics, and of the structure and functions of less complicated beings, otherwise it is confused and most difficult of attainment. Prof. Struthers, the able anatomist, asserts that as much of this science belongs to the invisible, and may be therefore read up, lectures need be only given thrice weekly; but the intelligent instructor in this branch will call to aid experiments, prepared specimens, the external and transparent parts of animals, microscopical sections, diagrams, and applied facts, to illustrate every lecture. Nearly half the candidates for the first half of

the last quarterly examination in the College of Surgeons failed from want of knowledge of physiology, which indicates want of zeal of the teachers of that branch. It was formerly the habit to perform many vivisections of even the higher animals to illustrate the established facts of this science, a practice as cruel as it is unnecessary. As, however, many brilliant discoveries have arisen in this way, vivisections might still be occasionally performed, with the aid of anæsthetics, in instances where benefit to science or mankind was likely to accrue. Brodie thought that physiology was better taught in Great Britain than elsewhere, as its practical uses were kept in view. Disease very often affords spontaneous experiments, as it were, in physiology; until Sir C. Bell showed that the seventh nerve supplied the superficial muscles of the face for motion, it often suffered division, although innocent of a disease (*tic doloreux*) attributed to it. This division entailed many a misfortune on the poor patient, and no relief whatever from pain was given. I have elsewhere stated that ignorant homœopaths have perpetuated the error. Gastro-intestinal irritation often produces remote nervous affections which physiology alone could discover, and appropriate treatment may follow. Advances in pathology have invariably been founded on close observation of natural phenomena, and there is no science so calculated to exalt the treatment of disease above mere empiricism. John Hunter found surgery little more than a mechanical art from ignorance of the laws of the vital functions in health and disease. He therefore devoted his whole energies to the study of the laws of life in man and animals, and left surgery a science, having enriched it more than any man who lived before him or after him. I have before endeavoured to show the need there is for educating the masses in physiology; and in the highest studies—theology, mental science, or the fine arts—a knowledge of it is most useful.

HYGIENE.

Chairs of hygiene have been rarely founded, that at the College of Surgeons being the only one among the medical schools of the United Kingdom, and that at Netley, for the instruction of military surgeons, being the most comprehensive and practical in the world. The great Cullen lectured on hygiene as part of his course on institutes of medicine. "Physiology and hygiene" would be a wiser combination of subjects than "anatomy and physiology," for the all-important subject of anatomy should be left to distinct teachers. The teacher of this subject could not be paid by pupils' fees, for in the present overcrowded state of the curriculum, it would be unreasonable to add it as a compulsory course. There is not much in the subject that physiology does not elucidate; and if the lecturer on that science gave his opening twelve lectures on public health every second year, students commencing, those more advanced, and the public of the town would be sufficiently lectured to. The same professor might on the alternate years devote as many lectures to animal physiology and classification. The College of Physicians have directed that instruction in hygiene shall be given by either the professor of medicine or forensic medicine. Some body should undertake to teach the laws of public health, else it is most foolish to call on corporations to appoint officers of health while no arrangements for training them exist. During the last session of the Medical Council, Profs. Acland and Stokes advocated the granting of separate qualifications in hygiene.

COMPARATIVE ANATOMY AND PATHOLOGY.

Very many of the regular arrangements in inferior animals are copied in the abnormalities of man—*e.g.*, the intermaxillary bone of most mammals is imitated in double harelip and cleft palate. Many diseases of

domestic animals—cattle-plague, pleuro-pneumonia, and tetanus, for example—afford opportunities of pathological investigation and experimental treatment which the human patient does not present. Many most useful remedial means are afforded by the animal kingdom, and to it belong many of the parasites which attack us. Just as in physiology the laws of the healthy body have been mainly ascertained by studying humbler organic forms, pathology, or the laws of unhealthy action, will especially improve through the study of the diseases of animals. The bequest of the late Mr. Brown has enabled the London University to found an establishment for the study and treatment of diseases of animals, and important additions will be doubtless made to pathological science. In Ireland there is yet no means of teaching the veterinary art, and great losses to the agricultural interests of the country ensue. A novel malady termed charbon is at present rife among cattle, sheep, and swine, and has been communicated with fatal results to several human beings. It is surely worthy of profound scientific investigation. Some of the medical schools which possess museums of comparative anatomy might, without loss of dignity, admit veterinary students. In Austria and Prussia all medical students are obliged to study the diseases of animals, and if they settle in remote districts, to treat them as well as human maladies. Those who are expert in veterinary medicine are preferred for district physicians. Agriculturists, meat inspectors, and horse owners also attend the great school in Vienna. When cattle-plague invaded Scotland in 1770, the illustrious Dr. Cullen was the person chosen to advise the government as to its nature and prevention. At one time the examiners of the Veterinary College were Sir A. Cooper, Sir B. Brodie, Sir C. Bell, and Drs. Babington and Bright. No court of examiners in modern or ancient times ever contained so many men whose names are immortal.

CHEMISTRY.

Chemistry is the noblest science which can occupy man's mind, and is therefore, exclusive of its many bearings on medicine, a knowledge which the student should master. At every step physiology wants its aid, and in the prescribing of medicines its principles must be understood, in order that the components shall combine and not mutually decompose, becoming detrimental or inert. A perusal of the writings of such masters of chemical pathology as Lehmann, Bence Jones, or Garrod, will convince anyone that the future of medicine is more dependent on organic chemistry than any other branch of human knowledge. Even during the last century this was felt, for many of the greatest pathologists—Boerhaave, Cullen, and Gaubius, for example—held the combined chairs of physic and chemistry. Accurate diagnosis of the diseases of many of the secreting organs cannot be made without the skilful employment of chemical tests. Many of the sounds and motions, normal and abnormal, of the respiratory and circulating organs depend on the principles which the science of natural philosophy elucidates; and its branches, heat, electricity, and optics, are most valuable not only in explaining the physics of the human body, but in affording suggestions for alleviating its ailments. It should then form an element of both preliminary and professional study.

BOTANY, PHARMACY, ETC.

There is no more efficient exercise for the great faculty of observation than the exact science botany; and as the vegetable world yields nearly all our medicaments, the importance of its study has been always fully recognized. Lectures, examinations, and herborizations are the means the student can command. However, botany, as well as chemistry and physics, should be

made preliminary to the proper medical courses. By having so many subjects compressed into three years the student is confused, and, in the words of Huxley, you "destroy his mental digestion, and make a sort of intellectual *foie gras* of him." The artizan who did not understand the appliances of his art would, indeed, be unscientific, and the medical practitioner must also have an accurate knowledge of the many curative agents mankind has been blest with. This knowledge is to be gained from lectures on materia medica and therapeutics, and the exercise of the information so acquired during his attendance on practical pharmacy, which many bodies wisely enforce for some few months. The lecturer on materia medica might, with advantage, make his course (or a second one) an opportunity for the students to practise dispensing, the more so as it is now much simplified, the multiplicity of "bases, adjuvants, correctives, and vehicles" being obsolete. Complexity has tended to delay the acquisition of positive facts about the action of medicines, for with a heterogeneous mixture of half-a-score, who can tell the effect of each. Therapeutics are not scientifically taught, and hence the ignorance and scepticism so common on the subject. It behoves the practitioner to gain a knowledge of pharmacy, as errors may be discovered and made known by the compounder (mayhap a rival practitioner), and in addition to the public danger, damaging exposure may follow. The subject of materia medica has been much facilitated by the publication, during the present year, of a national Pharmacopœia, the greatest boon the Medical Council has conferred, and by comprehensive treatises, the most popular of which issues from the Dublin press. Notwithstanding the crowd of subjects which force themselves on the student's attention, the subject of forensic medicine should never be neglected. It is a resumè of previous knowledge made applicable to the aid of judicial investigations. It is much to be regretted

that the examinations of bodies by coroners do not take place in the medical schools, where the lecturer on jurisprudence and his class would learn much. Such is the case in Austria, *post-mortem* examinations being obligatory. There is no place where the reputation of a practitioner can be so easily made or unmade as a court of justice. The value of medical jurisprudence is evident in serving the criminal department of the state justice, and it is to be regretted that unseemly differences so often occur in tendering evidence. Some remedies for this evil have been proposed in previous pages.

The study of medical and surgical cases has been discussed under the head of hospital practice, but the importance of the study of lunacy in asylums may be again dwelt on. In a school of medicine there should be a chair of psychology, normal and abnormal. The profession is not gaining respect in this department; for a late Lord Chancellor and other legal authorities in England viewed as "absurd" the idea that medical men were better judges of the matter than other people.

OBSTETRICS.

The next branch of medicine I shall dwell upon is the obstetric art. Considering its importance there is no just reason why it should hold an inferior rank; nevertheless, it was formerly a ground of disqualification for the fellowship of the College of Physicians and for the councilship of the College of Surgeons, London; such a restriction has not yet been removed. Dr. Smellie, one of the most famous teachers of the art, was held up to scorn, in 1748, for having a lantern above his door inscribed with the words "midwifery taught here for five shillings." If such a practice was general one cannot wonder at the rule of the colleges. Dr. Smellie acquired his commercial tastes while employed both as a draper and midwife in Lanark. It is now the exclusive employment of some of the most

erudite of our profession, and was combined with other branches of the healing art by such men as William Hunter and William Dease. When the exclusive rule was being made in the London College of Physicians, Sir John Pringle proposed an exception in favour of the "man-midwife to the person of the Queen," William Hunter, but a large majority decided otherwise. There is no city which has reason to be more grateful to the philanthropy of obstetricians than Dublin, where the great Mosse has left so grand a monument of his benevolence and perseverance. Midwifery is an art easy of acquirement, at least as far as normal delivery is concerned; but as departures from the usual process are most common, it behoves the student to be acquainted with the details of many cases, so that at least six months' attendance should be enforced. Lectures can also teach its principles, and the anatomy and physiology of the reproductive organs. The diseases peculiar to women and children are generally joined to the subjects of the midwifery professor, and wisely; but there is no doubt that in many cities sufficient opportunities do not exist for illustrating these affections, especially the latter, and hence their diagnosis and pathology are somewhat imperfect. There are few schools which have contributed, however, more largely to the literature of this subject than that of this city. A special institution for their treatment exists in Pitt-street; and in St. Vincent's, the Meath, and Adelaide hospitals special wards are devoted to them. There are then, it is apparent, very many branches of human knowledge which the student must master; and their acquisition would be indeed difficult—aye, almost impossible, did they not possess a mutual correlation, so that the study of one leads to that of another, as its usefulness becomes apparent. It is to be lamented that the licensing bodies do not enforce, or at least strongly recommend some well-chosen order in which these sub-

jects should be studied; but as the boards are so numerous, and their requirements so various, this is not done, and the student is indeed perplexed. In the French and German universities a regular progressive course is recommended, but is not obligatory. With us it would be most desirable that students should be advised in the same way; but indeed the only injurious mistake which is ever committed is the postponement of chemistry, the handmaid of all medical knowledge, to the second year. Anatomy, physiology, and surgery should be studied in all of the three years, but should be made progressively extensive.

The following three years' curriculum could not fail to train the student's mind advantageously. Curricula should be similar in every school, otherwise the student wishing to spend his second or third year in another school would be seriously inconvenienced:

Winter.	FIRST YEAR.	Summer.
Chemistry		Practical Chemistry,
Physiology	Hospital	Natural Philosophy,
Practical Anatomy		Botany,
Surgery		Comparative Anatomy.
	SECOND YEAR.	
Physiology and Hygiene		Materia Medica (including
Practical Anatomy	Hospital	Practical Pharmacy),
Surgery and surgical appliances	and Lying-in Hospital	Medical Jurisprudence, Midwifery.
Physic		
	THIRD YEAR.	
Physiology and general pathology		
Practical Anatomy	Hospital	
Surgery, including operations		

Tutorial instruction should be continued throughout the whole period, the last summer being devoted to a general resumè of the business conducted by private teachers and to hospital practice.

MEDICAL SCHOOLS.

In the following cities and large towns of the United Kingdom there are medical schools and recognised hospitals—Birmingham, Bristol, Cambridge, Hull, Leeds, Liverpool, Manchester, Newcastle, Oxford, Sheffield, Belfast, Cork, Aberdeen, Edinburgh, Glasgow; and a multiplicity in London and Dublin which no disinterested observer could deny was injurious to the cause of medical education. So surely as a moderate number creates a wholesome amount of competition, an inordinate number produces a competition to undersell and otherwise degrade. Moreover, the vast number of schools cannot each attract a sufficient number of pupils to recompense the lecturer and make him independent of other resources. He cannot, therefore, be expected to throw much zeal into the employment, and just as he gets most efficient, he will desert it as soon as any more profitable one presents itself. There should be something to content an able teacher to devote his whole life to the pursuit. In the case of the chairs of medicine and surgery, some of the men in greatest practice retain them for a whole life. Sir W. Fergusson has now been lecturing on surgery for forty years. It may be objected that a large number of pupils cannot be instructed with the same care as a small number in class. The two Edinburgh schools show the falsity of this statement, as the professors, being adequately paid, can afford to give their entire time to the business of instruction. A well-built lecture theatre will accommodate hundreds of pupils, microscopes and subjects can be provided in proportion, and demonstrators can be appointed in the ratio of one for every twenty-five dissectors. It may be here mentioned that demonstrators should be always appointed and removable by the anatomical lecturers, as they can best judge of fitness for the office and the manner in which the duties are carried on.

In London, owing to its vast extent, a large number of hospitals and medical schools are needed, and the eleven which exist, with the number of beds and new entries this session, are enumerated below:

	Beds.	Pupils.
St. Bartholomew's Hospital -	650	82
Guy's Hospital - - -	570	76
University College Hospital -	136	51
King's College Hospital - -	160	30
London Hospital - - -	500	26
St. Mary's Hospital - -	150	21
Charing Cross Hospital - -	115	17
St. Thomas's Hospital - -	210	16
St. George's Hospital - -	350	14
Middlesex Hospital - -	300	12
Westminster Hospital - -	200	10
New entries - - - - -		355

Total entries, 1,125.

Two or three of these which attract so unremunerative a class, and which are very close together, might readily amalgamate with larger ones. Edinburgh, with an average of 500 medical students yearly, has only 2 schools, while Dublin has 6 medical schools, and 9 separate recognised hospitals for some 600 students. Even in ratio to the population only, the like proportion for London would be 50 medical schools, and even the 11 are not all flourishing. The schools of Trinity College and the College of Physicians, of the College of Surgeons which was chartered for teaching purposes, of the Catholic University, and probably that of Stevens' hospital, which alone combines college and hospital—a very advantageous plan according to many—must needs remain distinct; but surely the two proprietary schools, the Ledwich and the Carmichael, should amalgamate with one of those previously named. These schools are under control of the

Council of the Royal College of Surgeons, and that body would surely suggest equitable terms on which some of the lecturers from these schools might be added to their own staff and division of fees arranged. Such is being just at present arranged between Queen's and Sydenham Colleges, Birmingham; the former, being equidistant from the two hospitals, is to be the future school, which will start with 100 pupils. The only chair which will be hard to decide is surgery, as between the two schools there are five teachers of that favourite subject, and two new candidates. Some of them should surely apply themselves to anatomy or other branches. The whole profession should then demand that no new schools should be established. The Dublin hospitals' commissioner, Mr. South, advised an impracticable combination of those on the north and on the south side, and specially urged the formation of a medical college at one of the hospitals. This plan was carried out without such success as would encourage the repetition of the experiment. The contrary plan holds in Paris, where medical teaching is most perfect, and there is some public antipathy in Dublin to the union of dissecting-rooms and hospitals.

It has been sometimes asserted that there should be no school in connexion with the College of Surgeons, but it seemed to be the original object of the early charter to found such, and thus provide surgical education for the country. It might as fairly be urged that the universities should give up their teaching faculties, and become mere examining boards; the only one, St. Andrew's, which has no regular school, is rapidly failing in the number of its medical graduates, and was not deemed worthy of a separate representative on the medical council. In the Scotch Reform Bill of last session only those graduates who had passed since residence was required for medical degrees, were to have a vote.

The College of Physicians and Surgeons, New York, the most respected medical body in America, has a medical school, and the Surgeon's Hall School of Edinburgh has nearly as close a connexion with the College of Surgeons as exists between the analogous bodies in Dublin.

How different from the small struggling schools of London and Dublin is the admirable system of medical education in Paris—one licensing body and one school able to accommodate some 1,200 pupils. For such an audience the professor, elected for conspicuous merit, may well bestow his entire time. In London and Dublin schools a lecturer's class may be under 20, and his profits not twice that number of guineas. Under such circumstances what encouragement is there to the lecturer (especially on such subjects as materia medica, medical jurisprudence, or botany, which do not lead to practice) to earnestly devote himself to excel? In the London schools altogether there is the rate of a professor to every four students; and in Dublin, adding the hospital officers and school lecturers, one teacher for every 3¾ pupils.

There are no means for determining accurately the number of students attending each of the Dublin schools—the only return being that presented to the Anatomical Committee, which is composed of a lecturer of each of the medical schools. The return from each school is merely an order to get subjects, the sum of £1 being lodged for each half. In schools, therefore, where there are *chronic* men, newly appointed and very industrious teachers, and army pupils and officers who wish to revive anatomical knowledge, several pounds will be lodged for the getting of subjects besides those required for the sessional pupils.

In Trinity College, arts students, if entered as medical students, are exempted from some subjects in the B.A. curriculum, and thus some of them for convenience,

or to try their tastes, enter as medical students, and appear in the returns of the anatomical committee as wanting subjects. The numbers returned for the present session were—Trinity College, 188; Ledwich School, 178; College of Surgeons, 161; Carmichael School, 100; Catholic University, 90; Stevens' School, 80; making a total of 797. As all licensing bodies require as many sessions of hospital attendance as of lectures, and some an additional year, the returns from the ten recognised hospitals ought at least to equal those from the schools; yet, according to information supplied by the respective hospital secretaries, the total number of entered pupils is under 600. With regard to the distribution of subjects, an injustice is done the larger schools, for during the months of October and November, before the lists are closed, they only get the same number of subjects as the smaller ones. Surely the supply ought to be proportional to the average number of the three or five years preceding.

The Inspector of Anatomy should be called on to adjust this matter, and it would be very beneficial if he were to make a monthly visit to the schools, and require each entered pupil to record his signature. This would give evidence at least of the visits of every student to the city. It has been stated that certificates for attendance have been granted to gentlemen who throughout the whole session were scores of miles distant. The certificates of candidates for licence should afterwards prove conformable to these inscriptions. Except in Trinity College, and there only for the four compulsory courses, no reliable roll is called, or, if it be, at least the refusal of a certificate for insufficient attendance is scarcely recorded. There are great difficulties in the way; the idle will resent the compulsion by being noisy and inattentive. To call a roll of say 150 students would be to inflict a quarter of an hour's unprofitable routine instead of instruction on the class, and by some of them

in joke crying "here," a gentleman who is absent may get credit for attendance. Unless it is called every day, and that the lecturer himself misses no lectures, it would be evidently unjust to refuse a certificate, for the student might have been present on those occasions when the practice was omitted. Markers may be appointed, but will not be reliable. If one school was to be exact, some students would avoid it for those more lax. In continental universities—that in Piedmont, for example—collegiate misdemeanors are punished by denial of marks, and the culprit may have to attend a course a second time. However, to secure some evidence of the student's presence in town, and of the real number attending each school, some independent person, such as the Inspector of Anatomy, Secretary of the Branch Medical Council in each of the three kingdoms, or deputy appointed by them, should be appointed to make periodical visits and call rolls, and perhaps ascertain the amount of information gained by each pupil. Some authority from the licensing body, the teacher, or an independent officer should ascertain, by periodical examinations, that students were paying for knowledge acquired instead of for the receipt or certificate—all that is now demanded. If there were not among the schools such competition that the standard would be lowered to catch the money of the idle, this test of proficiency should be applied by the lecturer himself. Then a class-roll would be scarcely needed, for if the lecturer taught the subject well, the student would find it his interest to attend, and if he taught the subject badly, it would be fair to give the student the chance of making it up more readily by study or private teachers. The schools are under the visitation of the Royal College of Surgeons. The council of that body should, by periodical inspections, ascertain that the number of anatomical and pathological preparations, of microscopes, of pharmaceutical specimens, and of chemical apparatus is adequate to the efficient education of the pupils.

The duration of the winter session in the United Kingdom is six months—in England, October, November, December, January, February, and March; but in Ireland and Scotland the colleges begin and end a month later. Vacation is for three weeks at Christmas, and two at Easter, but the English periods ten and six days respectively might be well followed. In Trinity College the session is for five months ending in March, and in the American schools five months only are devoted to study, commencing in October. In Philadelphia there is the "Summer School," in which lectures are delivered from April to October on the subjects usually taught in winter, for the confessed purpose of forcing medical education. The fee is 50 dollars for all the courses, and about twice this is charged for the winter lectures. The fees must in most colleges be paid in advance. The hospitals in that city may be attended gratuitously.

In many of the American colleges there are "adjunct professors" who assist the regular occupants of the chairs, and frequently succeed them on death or resignation. In some there is an unwise tendency to encourage specialities—such titles as "lecturer on diseases of genito-urinary system," "professor of diseases of the chest," appearing in the prospectuses. In those in which the hospital and college are in the same building, lectures and clinical attendance are given at alternating hours, so that the fatigue of attending didactic lectures for three or four hours successively is avoided. The autopsy room is usually provided with comfortable seats for all the students—a plan very worthy of imitation in some of our hospitals; and in Bellevue hospital there are prizes for the best preparations of surgical anatomy. Such, if established in Dublin, would stimulate the art of dissection, which is much neglected. In New York a free library of over 11,000 medical works has been founded as a memorial of the great Valentine Mott by his surviving relatives.

The number of practitioners annually licensed by the American colleges is enormous—for instance in Bellevue hospital alone 140 graduated in 1867; in Jefferson college 150 were capped, and 856 matriculated last session. In 1850 there were 43 colleges with the privilege of licensing, and in 36, which alone were in active operation, there were during that year 4,500 students and 1,300 graduates. In 1850 it was exposed that 20 of these colleges had no efficient provision for hospital instruction. Not being endowed, they thrive by making these institutions popular with students. It is calculated that there are in the United States at least 40,000 qualified practitioners, and a very great number of unqualified ones.

The system of private teaching was unknown in the United States till last year, and seems to have been originated by schools with the view of keeping their alumni at home; but those who are able to afford it will still take the European tour, which they feel will not only enlarge their medical knowledge, but tend to give the refinement and polish which travel can alone confer. For greater attraction some of the colleges offer this system of grinding free, and in one of them twelve gentlemen conjoin to give it, each stating in their prospectus their qualifications and the European teacher under whom they had studied the speciality. Another teacher circulates the following odd handbill: "*Quiz Class in Midwifery*—Dr. S., Assistant in practice to Prof. S., will drill students for their final examinations in midwifery, meeting the class two evenings each week during the college course. Dr. S. will endeavour to make the course a clinical one, so far as practicable, by demonstrating upon the living subject the special anatomy of the parts, fœtal auscultation, and the mechanism of labour.—For particulars apply at Hotel Pelham. Office hours from 9 to 10, A.M., and from 1 to 3 P.M."

To enable an estimate of the quality of some of the

American universities to be formed, some facts about one of them, Harvard University, Boston, for example, may be mentioned. Its staff for all subjects of arts, law, and medicine numbers 66, among which such illustrious names in literature, science, and medicine as Longfellow, O.W. Holmes, Dana, Agassiz, Asa Gray, Brown-Séquard, and Bigelow, may be found. The library contains 168,000 volumes, and the regulations are of the most advanced and liberal character. It is not to be wondered at, therefore, that this institution had last session 961 students, of whom 301 were medical.

Every medical school should have a dean or registrar, whose duty it would be to superintend the repair of the building, manage the advertising, and correspondence with pupils, and with parents, to whom they would be more or less responsible. The doubling of one medical class in Dublin within the last few years is wholly due to the activity, in such matters, of its registrar. As the office is onerous, and not over agreeable, it should be taken alternately by the professors—or if permanently by one, a small recompense should be allowed.

To exhibit the true principles on which educational institutions should be founded, no higher or more disinterested authority than Sir H. Davy could be quoted: "Those who establish foundations for teaching the sciences should at least understand their dignity. To connect pecuniary speculations or commercial advantages with schemes for promoting the progress of knowledge, is to create sterility and destroy improvement. A scientific institution should be made no more an object of profit than an hospital or charitable establishment. Intellectual wants are at least as worthy of support as corporeal, and they ought to be provided for with the same nobleness and liberality." It is desirable that such institutions should be endowed by private or perhaps public benevolence, as mere pupil's fees, although they stimulate the teacher's zeal, form a very insufficient and

objectionable mode of recompense, and cannot be adequate to the provision and care of suitable buildings, museums, and libraries, without which medical schools are ludicrous, or, still worse, injurious to the best interests of the profession and the public. The fact has been lately stated, that the profits accruing to an eminent naturalist who gave lectures on botany at one of the London hospitals for two sessions was £2 10s. The greatest advantage would flow from lessening the number of chairs, especially in such scientific subjects, by amalgamating schools. Schools and hospitals should be watchfully supervised for the purpose of ensuring adequate instruction by the qualifying boards for which they educate. The fees, number of teachers, and other particulars of the schools of the United Kingdoms, are arranged in succeeding pages.

The recognised schools which are all connected with hospitals in London are, alphabetically, Bartholomew's, Charing-cross, George's, Guy's, King's College, London, Mary's, Middlesex, Thomas's, University College, and Westminster. The chairs in all are physiology, descriptive anatomy, demonstrations, chemistry, medicine, surgery, materia medica, midwifery, botany, medical jurisprudence; and the chairs which some possess are comparative anatomy, pathology, dental surgery, ophthalmology, aural surgery, histology, and natural philosophy. The expense for all lectures and hospital practice may be averaged at £100—Charing-cross (£77 14s.) being the lowest, and St. George's (£105) the highest.

The recognised provincial English schools are, Birmingham (Queen's and Sydenham Colleges just now being amalgamated), Bristol, Hull, Leeds, Liverpool, Manchester, Newcastle, and Sheffield. The chairs are nearly the same as those in London, the less practical being often omitted. The fees for all lectures and hospitals required for the College of Surgeons averages

about £50. The Oxford and Cambridge University schools will be alluded to further on.

The medical schools of Scotland are the Aberdeen, Edinburgh University and Surgeon's Hall, and Glasgow University and Anderson's University. The chairs are similar to those in Ireland, except that of anatomy and physiology, which is termed "institutes of medicine," and includes physiology and pathology. The fees average £3 3s. for each lecture.

In Dublin the schools are not connected with hospitals, except that at Dr. Stevens' hospital. In addition to this, there are the School of Physic (Trinity College), School of Surgery (College of Surgeons), School of the Catholic University, and the Ledwich and Carmichael proprietary schools. The chairs are anatomy and physiology, practical anatomy (two usually), surgery (two usually), physic, chemistry, materia medica, medical jurisprudence, botany, and midwifery. The number of demonstrators varies from three to seven. The fees in all are three guineas per course. The only other schools in Ireland are the Queen's Colleges at Belfast, Cork, and Galway. These chairs differ, thus there is but one professor for the physiological and anatomical courses, and no separate professor of medical jurisprudence, but there are professorships of modern languages and natural philosophy which the medical students must attend. Class-rolls are regularly called. The libraries and museums of these colleges are very complete.

SCHOOL OF PHARMACY.

At the School of Pharmacy, lectures are delivered from October to July at half-past eight A.M., being the hour most suitable to those employed in establishments; but the laboratory is open from half-past nine to five daily. Such famous names as Fownes, Pereira, A. Todd Thomson, Redwood, Bentley, and Attfield, are to be

found on the professors' roll, the three last-named now occupying the chairs of pharmacy, botany, and chemistry respectively. There is an extensive library and a museum. The fees for the lectures are four guineas, or two guineas to registered apprentices or assistants. For work in the laboratory, for any two hours daily for the year, the fee is twelve guineas, or from half-past nine to five daily, twenty-five guineas, including apparatus and materials.

No other special school of pharmacy exists in Great Britain or Ireland. The Apothecaries' Hall of Ireland supported a school of medicine for some years, but in 1855 it passed into possession of the Catholic University. Their laboratory, under Mr. Tichborne, would supply the fullest opportunity of studying pharmaceutical chemistry. The laboratories of the medical schools, or of the Royal College of Science, might be used for instruction in general chemistry, and the Botanic Gardens of the Dublin Society offer abundant means for studying medical botany.

PRIZES.

The policy of stimulating medical education by prizes and other rewards is a subject on which the best authorities are divided. They are objected to inasmuch as it is alleged that they are apt to induce the exclusive study, and that not by the most practical methods, of one subject. There is much weight in this argument, but it is, on the other hand, very often the case that they have an opposite tendency, and the student who has mastered one subject has also, owing to the training his mind has undergone and to his perceiving their importance more fully, mastered the other branches of medical lore. Besides, prizes and distinctions should be especially given for general proficiency, and that, too, determined by a demonstrative and clinical test. Prizes also very often displease those who do not gain them, making them

feel a certain inferiority, and it may be a tinge of jealousy. This, if the examination were necessary for obtaining a certificate, included the whole class (and not the very small section of it as at present)—if it was conducted in a manner altogether above suspicion, and if no extraneous circumstance, as the timidity of a candidate, were allowed to interfere, would never occur. No mind could be so ungenerous as to envy distinctions gained by superior talent or more persevering industry. I would then advocate the distribution of prizes for general proficiency, and perhaps (if the whole class was examined) for special subjects, as it would greatly stimulate medical education, in the same manner as the opening of the public services to merit by competition has manifestly and largely done. To illustrate the details of such a plan, the subject of physiology may be taken as an example. The examinations should take place during the last week of the session, and comprise—1. Recognition and description of zoological specimens, optical instruments, microscopical preparations, and organic substances which have been exhibited during the course. 2. *Viva voce* questions (the same to each candidate). 3. Written papers (the same to each candidate). Essays on physiological subjects read before the students' society should be taken into account, if candidates offered them. Anatomy, surgery, medicine, chemistry, and other branches, are even more capable of demonstrative examination. The class should be rigorously divided into first, second, and third-year groups. In a school with 150 pupils, £50 out of the profits of the lectures might be fairly allocated for three prizes in each year for general proficiency.

CATECHETICAL INSTRUCTION,

owing to many misconceptions, has been very generally decried. To guide and systematise the student's reading, to oblige the careful noting of hospital cases and attention to lectures, to stimulate the careful observation of the appearances presented by dissection, to exercise his reasoning faculties, so that he shall completely digest and understand the many varied facts offered to his mind, and to enable him to express clearly, fully, and systematically, his ideas, are its legitimate objects—and who can deny their utility? Passive attention to a lecture is, especially with some, very difficult, and while a student would hesitate to stop a lecturer to ask him on some point he did not understand, he often does so with a tutor. But men are apt (as in many other instances) to confound the abuse with the use, and then justly depreciate its exclusive adoption. That any mere word-of-mouth instruction, which only loads the faculty of memory, could be substituted for all others, is simply impossible; and how inapplicable would such information be to relieve the maladies of the living patient! This system of "cramming" may stock the mind, but it fails in that moulding of the mental powers, and in developing that most inestimable of faculties, a sound habit of thought, which other methods perform. A "grinder" is paid according to his success; if school and clinical teachers were so paid great changes would occur. If the former passes a pupil in a few months, the latter should do it more efficiently, with all his cases and museums at command, if he did his duty.

I would then advocate an efficient system of tutorial instruction throughout the whole period of the student's pupilage, and thus avoid "forcing" or "cramming," which an appropriate method of examination would altogether suppress. Tutorial instruction should never be conducted at the hours allotted to hospital or lecture,

as this would afford a pretext to the idler to neglect these most indispensable duties. Such a system is now adopted in many institutions where medical tutors are appointed, and in Edinburgh the late Professor Goodsir stated its advantages to be "that it allows the pupil to see and more closely examine the structures shown at lectures, that it affords more full and precise information, and keeps the student *au courant* with the lectures." The great Medical Congress of Paris reported: "Private instruction does not supersede that which is official, inasmuch as it can confer no title to the acquisition of degrees; but as an adjunct to public instruction it is highly useful, and from the ranks of the private teachers have arisen many of the most distinguished professors." The professors in German universities are also chosen from among the private teachers of each subject who most distinguish themselves. There are usually two or three such teachers in every subject. Some years since, also, the court of the Royal College of Surgeons in London stated, "in the system of oral examination they see nothing objectionable, but, on the contrary, innumerable advantages. They are, therefore, most favourably disposed to any efficient course of private tuition carried on in connexion with lectures and hospital practice, but they cannot too strongly express their opinions that such instruction should be extended over the greater part of the student's career." However, a general resumè of the candidate's previous labours immediately before the final trial (or "strapping" as it is called, carrying the sharpening metaphor still further) cannot be disadvantageous. Nevertheless in one of the most severe letters which ever appeared against grinding, "Observator" complains of the following advice given by a grinder to pupils about "to pass the Hall:" "If you get Mr. A. you may rest pretty easy in your mind. He is very kind and gentlemanly, and is always unwilling to reject any man who knows his Pharmacopœia. Look

well over that book, and remember that the subjects always come in it alphabetically, so that in searching for anything to which he shall direct your attention, you may be able to open on the right place, with the air of a person who is quite familiar with the learned volume in question, and understands it from its alpha to its omega. If you get Mr. B. you will find him thoroughly practical, so be sure to narrate all the cases you have seen, especially midwifery ones. If you get Mr. C. you will find him pettish, very fond of putting catch-questions, as the Latin derivation of hœmoptysis (a word you will recollect really derived from the Greek). He will also make a little fun of you, and perchance tell you that you know no more of your profession than a governess or a washerwoman. Take care, by the way, that you do not admit to this gentleman that you studied in Scotland, if such be the case, for he has a most sneering antipathy to all medical schools and professors north of the Tweed, and would like, if he could, to pluck you for the very admission." Now, really, if examiners have such absurd peculiarities, and if the governing bodies of the colleges will not substitute more sensible men, I do not see why it is improper that candidates should be advised of them. Private tutors should be appointed to the proportion of three or four for every 100 pupils, and as they cannot be expected to be omniscient, they should be restricted to anatomy and physiology, surgery and medicine, chemistry and materia medica respectively. The fees should be regulated like lecture fees, about £4 for all the tutors from each pupil for the session. Besides the regularly-appointed tutors, others might endeavour to get pupils who were particularly slow, or who had been especially idle, to pay by the month for an hour's private instruction daily; but the tutors should be protected by at least two sessions being spent in their class by each pupil.

READING.

The reading of a student must be necessarily confined, in great degree, to the compendia of the various branches of medical science, as his leisure from lectures and hospital would never allow him to read the numerous monographs which issue from the press (121 purely medical works were entered at Stationer's Hall last year). This is, however, the less to be regretted as they are often written in so diffuse and unpractical a manner that they could not fail to distract attention, and many of them are written more to display the writer's special knowledge than to teach the reader. So much was this the case at one time, that it was made a rule in medical ethics never to publish during an author's lifetime. The writings of the moderns might with advantage be modelled after those of Pott, W. Hunter, and such masters of medicine and surgery, which are minute without being tedious, and are always clear and precise. Watson's "Physic" is a model student's book, for it is most pleasantly written—a character which much aids its digestion—and is not encumbered with foot-notes, which, although they make a show of erudition, are very confusing to the student.

There are some invaluable treatises—not all, by the way, of the most modern date, the writings of Colles, Graves, Brodie, and Syme, for example—which must be perused. Prof. Harvey of Aberdeen proposed to reform medical education by the enforcing of regular and special text-books, which should afterwards be the sole subject of examination. If such perfect books could be written, they would supersede all other means of instruction; for, to use Mr. Simon's expression, they would give all the words of the lecturer except his "hums" and "haws." Text-books should be remarkable for accuracy yet conciseness—rather aphoristic than diffuse, so that the facts of each science may be

expressed in as few words as possible, and the thoughts packed closely, for the reflection of the student and the explanatory efforts of the teacher will make them more full and explicit. If disputed matters and such less important subjects are to be discussed in the pages of text-books, they should be printed in distinct type, so as to allow the junior student to value the important and the unimportant. The additions of questions on the facts of each chapter, or, when the licensing bodies improve their systems of examining, selected from their papers, affords a most useful exercise for the student's memory and judgment. The professor of the subject might advantageously follow the order of such books. A regular system of reading certain hours daily should be adopted and persevered in. Reading should be not merely receptive of the author's ideas, but reflecting and discriminating, and such kind of study is fortunately less tiresome than the mere stuffing of the memory.

It was once the fashion to decry "reading and such theoretical knowledge;" and both Sydenham and Dr. Gregory, when asked by a student what to read, are said to have told him "Don Quixote" (a great psychological study, by the way). Medical works are too often crowded with hosts of opinions; and, although nothing is more valuable than precedent, yet such crowds of authorities, often of inconsiderable value, and introduced to oblige or propitiate contemporaries, are altogether too great a tax on the student's memory, and possess no practical benefit. The illustrious Göethe, of whom our profession is so proud, on this point remarks, "All professional men labour under a great disadvantage in not being allowed to be ignorant of what is useless. Every one fancies that he is bound to transmit what is believed to have been known." To a certain extent, however, remembrance and gratitude for those who have enriched our science should be preserved, as otherwise it is quite possible for a former author to be

pirated by anyone thirsting after fame, and who takes the trouble of ransacking some dusty, forgotten, yet valuable tome—a mode of discovery not unknown in medical literature. It is also too common that ambitious practitioners rush into print, and publish cases they may happen to treat, although similar ones have crowded the journals before, and though they do not even increase medical statistics. The publishing of cases which have not arrived at their termination is also very undesirable. How fairly may a medical journal which does not foster this *cacoëthes scribendi vel graphomania medica*, quote for the heading of its variety column, *quid novi sub Hippocrate*. The habit of writing out correctly the notes taken during the day is not only useful in fixing on the mind facts, but it exercises in spelling and diction, which many students sadly fail in. As of other sciences, so of medicine is Bacon's aphorism true: "Reading maketh a full man, writing an exact man, and speaking a ready man."

From the student's start a regular system of reading some two, three, or four hours daily should be arranged and persevered in, for thus will his time be much better spent than in desultory reading or "making up" at special times. There is no time when the acquiring and reflecting powers are more active than in the early morning, the silence and brightness of which helps study. As a rule, Dublin students are not full readers, as the medical booksellers will prove. This may be said, indeed, of the whole Irish public, as contrasted with the English and Scotch; but it is the fault of the schoolmaster devoted to classics, or may be often attributed to the want of high-class schools through the country, in which a taste for reading would be implanted. If students are exhorted to rely solely on grinding for acquiring knowledge, it will cause the want alluded to, and their mental powers cannot fail to become cramped and atrophied—if that professional term may be allowed—by disuse.

It has been often remarked that for the first few weeks every student will show unremitting zeal in the hospital and school, and will exhibit an intense admiration for some popular teacher. This is so clearly recognised in one of the London hospitals, that it goes by the name of "Sibson fever," as that able physician is the usual favourite.

MEANS OF SUCCESS.

Such, then, are the very ample means which are now at the command of the student, and it must be indeed his own fault if he does not profit by them, and subsequently succeed in the struggle of after life. To show that he may hope for this, let him weigh the words of Sir B. Brodie: "Having had now a long experience in the history of medical students, and having been careful to watch their progress through life, I am satisfied that the only method by which success can be attained is that which I have pointed out—earnest work; and I may add that I have never known an individual who thus applied himself seriously and in earnest to his task whose exertions were not rewarded by a reasonable quantity of professional success, and such as would satisfy any but an inordinate ambition." Students were never more impressively addressed than by the eloquent Lord Carlisle: "Remember that the business of education does not terminate with the college class or with the professor's lecture, but that every day of your lives may add to your knowledge, and every moment of time may promote your improvement. Strive always for the highest exertions of usefulness, for these all men may aim at; but be content with any opportunity of exerting them, for these God must decide for you. I know not how many of you may become great, but I feel sure that all of you may become good and happ[illegible]."

PART III.—EXAMINATIONS.

EXAMINING BY LICENSING BODIES.

THAT those about to embark in the practice of medicine and surgery should be submitted to a severe, extensive, and searching examination the public weal demands, so as to enforce the acquisition of such knowledge as would avail in the actual treatment of disease. This test should be practical, and if so, the industrious self-taught student will find no difficulty in passing. It is unreasonable to compel a student to load his memory with everything he has acquired throughout the four years of study—many of the subjects being merely the instruments for learning others—for one final examination. It would be well if all the colleges pursued the course which the Royal College of Surgeons in Ireland nearly a quarter of a century ago adopted, of having two or more examinations—one at the end of the second year and the other final. This system, however, was much opposed, and although supported by petition from seventy pupils of the college school, was for some time discontinued. It has been revived in the present quarterly examinations, with the difference that the first examination does not take place till after the third winter session.

The London college and several other bodies now enforce similar regulations. Every subject which the student has attended should be embraced, as otherwise it is useless to demand his attention to them. It is a serious, yet easily corrected fault in nearly all examinations conducted by the qualifying boards, that no prac-

tical test of knowledge is adopted, and that a student may positively answer all questions put to him without having ever followed those methods of instruction which alone would fit him for the duties of his calling. It seems the soundest and most manifest way of ascertaining a candidate's fitness to treat disease, to require him to do so, after having arrived at an accurate diagnosis, before the examining board, and similarly in every other subject of medical study which is learned by practical means, proof of knowledge should be rendered by a demonstrative examination. There were, doubtless, many obstacles in the way of this method, it being believed that words, the natural means of communicating ideas, were sufficient to show the candidate's fitness or incapacity for licence; but this has been abused, and it is notorious that persons have passed verbal examinations who were quite incapable of fulfilling the most ordinary duties of the healing art. These obstacles are being gradually removed, and the demonstrative method is rapidly becoming adopted by all licensing bodies. The examination should be divided into two portions—not, however, completely different, as some of the most essential subjects should be repeated at the second. For some time, and perhaps under peculiar circumstances, it might be allowable to pass both examinations at the same period. This practical plan of examining, the Royal College of Surgeons, Ireland, examiners adopted, as far as regards anatomy, in the examination for letters testimonials, since 14th December, 1858, and the following admirable scheme for the same method was devised as far back as 1845 by the council for fellowship examination (the London and Queen's Universities have adopted similar improvements): "1st day—The candidates shall attend at the college from two till four o'clock, when they shall prepare written answers to questions proposed by examiners. 2nd day—The candidates shall attend at an

hospital to be named by the council at the hour of two o'clock, when one or more patients shall be submitted to the observation of each candidate for such time as the examiners in medicine and surgery shall deem sufficient for taking notes of such cases. The candidates will then be obliged to attend in the theatre of the hospital for the purpose of being orally examined on the same. 3rd. day—The candidates shall attend at the theatre of the college at two o'clock, when a subject will be provided and the candidates required to perform such operations, and make such demonstrations as the examiners shall require." This examination was to be held periodically, but as gentlemen in the public services require to be examined when on leave of absence, it should be held at other times as well.

The examination in such subjects as do not admit of much practical illustration should be partly written, and this would test the candidate's orthography and composition (which it might be desirable to count for), and would be just towards those whom timidity or vocal defects prevent from answering *viva voce*. The first examination should comprise anatomy and physiology (human and comparative), chemistry and principles of physics, materia medica and botany. This would not trespass on the examiner's valuable time, as many candidates being examined simultaneously few such occasions would occur, and the most eminent of the profession would accept the office of examiner. In anatomy, bones, dried preparations, and the subject should be presented to him, and the candidate should be called on to name and describe the objects which they suggest for comment. He should be required to make a dissection of some important region or cavity (as one of the triangles of the neck, the axilla, the popliteal space, the ventricles of brain, or the posterior mediastinum), and should demonstrate, as if to the uninformed, each part brought successively into view. One dead body would thus

suffice for twenty candidates. He should be required to discover and explain anomalous distributions of arteries, &c., of practical import on preparations, which almost every museum contains—or if not, they should be prepared. In the London College, owing to the great number of candidates, the dissections must be already prepared for the candidates, and this is done by students of various schools. Care should be taken that they would not peach to others about the parts they had prepared.

The army and navy examiners now demand from candidates a knowledge of operative surgery, and call on them to operate on the dead body. The subject will, therefore, have to be more generally taught in schools than it has been, and the question will have to be settled whether a separate fee will be charged for the instruction. By dissection, by practising operations on the dead body, and by the experience of human suffering, which will deeply impress a well-regulated mind, can alone those characters of the operative surgeon be acquired which Lord Robertson aptly defined in describing the hand of Liston, "If as hard as iron and true as steel in the theatre of operation, it was as soft as thistledown when applied to the throbbing pulse or aching brow."

In physiology, he should be called on to describe such preparations as the fœtal circulation, the descent of the testis, the impregnated uterus, the stages of development of the frog, and also to recognise sections of bone, cartilage, muscle, capillary injections, and epithelium, under the microscope, arranging the instrument for such. He should also prove the presence of albumen, mucus, pus, or sugar, in different fluids. In chemistry, he should be required to name some ordinary chemical bodies and to explain their properties, and to test for some easily discovered metal, constituent of food, or water, or poison. In pharmacy, he should recognise

by the aids of sight, taste, and smell, some ordinary articles of the materia medica, and should be called on to prepare some pharmaceutical combinations in ordinary use. In botany, he should name and give brief specific descriptions of the more common and important plants in the British Flora.

A given number of questions should be set to be answered in the allotted time, at the expiration of which he should be required to read his answers aloud, and then submit them for further perusal by the examiners at their leisure. It would be convenient to have the second day for *viva voce* interrogation and demonstrations, in order to allow the examiners to announce their decisions to the candidates at once, their written answers of the previous day having been adjudged.

The second examination would take place at the completion of the curriculum, and might, for some two years or in special cases, be passed at the same time as the first, as it might be necessary for a candidate to obtain his licence at once, having studied with that intent. On the first day he should be given printed papers in anatomy and physiology, in medicine, surgery, midwifery, and forensic medicine, the number of questions in each subject being commensurate with its importance—say six in anatomy and physiology, six each in medicine and surgery, and three each in midwifery and forensic medicine—twenty-four in all. After a proper time, probably six hours, having been granted for answering as many of these as possible, the answers should be delivered to the examiners. On the second day he should be brought into the wards of an hospital, and required to elicit by the usual channels of information the history, diagnosis, and prognosis of six medical and six surgical cases, and to prescribe accordingly for them, and exhibit his surgical handiness. This should be done in the presence of the examiners, as instances have occurred of candidates learning, by means of a bribe,

all this information from patients more than usually intelligent submitted for this mode of examination. At first sight in the method there may appear a difficulty—namely, how to select without apparent partiality the hospital wherein the clinical test was to be applied. Let, however, each recognised hospital be selected by lot or in rotation (the order being kept secret lest students should merely prepare the cases in it); or let three be selected at once, and the students, divided into three batches, would undergo this real trial in the presence of at least two examiners. To this plan, then, no objections suggest themselves to my mind. At the last College of Surgeons and Hall examinations, living patients and microscopical objects were submitted to the candidates.

It might be well if candidates were obliged to draw up reports of these cases against the following days, so as to encourage this invaluable practice. This system of examining for a diploma by the bedside is carried on at the university of Prague, the oldest in Germany, Latin being the language used. Students are examined ten times during their five years course. Instruction is free, the professors being paid by the State. In Berlin, each candidate has the noting and treating of two cases for a fortnight previous to his being licensed. On the third day he should prepare dissections, and explain them, of some important cavity or surgical region, demonstrating and perhaps performing any surgical operation of which it may be the seat; and finally should be called on to perform some surgical operation and should be also interrogated upon some ordinary morbid preparations, after which a short *viva voce* examination in all the subjects should be given. The votes of the examiners should then be taken by numbers, and if the candidate had gained a determined minimum, he should have passed. The details of this plan may be more readily seen by the following tables:

FIRST EXAMINATION.

First day, 9 to 12, and 2 to 5 o'clock.—Printed papers on anatomy and physiology (human and comparative), chemistry and physics, materia medica and botany.

Second day, 2 to 5 o'clock.—Dissection of subject and demonstration and interrogation on same, chemical examination of articles in Pharmacopœia, &c., specimens of materia medica and plants, and further oral questions.

Do., 5 o'clock.—Decision of examiners to be announced to candidates.

SECOND EXAMINATION.

First day, 9 to 12, and 2 to 5 o'clock.—Printed papers on anatomy and physiology, medicine, surgery, midwifery, and forensic medicine, delivered to the candidates.

Second day, 2 o'clock.—In the wards of ——— hospital, six medical and six surgical cases submitted to each candidate for diagnosis, prognosis, and treatment, and to be reported upon, examiners to be present.

Third day, 2 o'clock.—Operations on dead body, recognition of morbid specimens, *viva voce* examinations on medicine, surgery, midwifery, and medical jurisprudence.

Do., 5 o'clock.—Decision of examiners to be announced to candidates.

The examination should be marked by numbers, a certain minimum passing. Although the system of appeal from examiners' decisions is dangerous, it would be only just to make some distinction between him who closely approached the required standard and him who wholly failed. It might be done by a more early period for re-admission to examination.

The medical examinations at Cambridge approach

closely to what has been detailed, and students are allowed to be present at them, by which they may gain many facts, and much about the right modes of study, and they form, as in most continental universities, an appreciative public.

Such a real, substituted for a verbal examination, would have the most wholesome effect in stimulating medical education, which has been already considerably done as regards those who seek appointments in the public services, for there the examination is demonstrative. No test, however, is required, after whatever licence he may have taken, from that officer whose duties may be thought by most more important to the State, viz., the poor-law surgeon. But indeed it may be doubted, under the present insufficient pay they receive, whether candidates could be induced to look for these offices if they required additional trouble and study. The marks of candidates should be certified if they required it, and they would prove a far more reliable testimonial than the recommendatory letters so much in vogue. Such a practical method of examining would compel students to be industrious during their entire pupilage, for indeed, under the present theoretical mode, they not unfairly say, "Oh, I'll learn my business *after* I have passed my examination by grinding." As an additional stimulus to prolonged and patient diligence, the establishment of first and second honour and unclassed divisions would indubitably do good service. It has already worked well in some institutions.

A brief historical and descriptive account of each licensing body will now be given.

ENGLISH LICENSING BODIES.

England.—Royal College of Surgeons, chartered 1800, and supplementally 1822, 1843, 1852, and 1859. It is governed by a council of twenty-four, who elect from amongst themselves ten examiners and a professor

of anatomy and surgery and of comparative anatomy. The grades are fellows (appointed either by examination or ballot) and members. From the vast number of its members it influences the profession in the most powerful manner. During last year there were 451 candidates for the membership, of whom 78 were rejected. The income reached £12,409 3s. 11d., and among the payments were £3,894 7s. 6d. to the examiners, and £3,088 11s. to other officers. Its museum, the finest in the world, contains 39,519 preparations, the most valuable portion put up by the illustrious John Hunter. Its library has about 50,000 volumes. The College has lately resolved that rejected candidates shall pay further fees on re-examination. The "chronic" men, who are affected by this resolve, are so smartly described in an article, "The Golden Gates," in the *British Medical Journal*, that much of it is worthy of quotation: "We venture to say that professional gratitude for this reform, accomplishing so many useful ends, will be exceeded by the admiration with which the ingenuity of the examiners will be regarded. There has always been a certain number of loafers about the schools and the College—fourth, fifth, and sixth years' men—men who have lost their count; men who have passed so often under the plough, that they feel it only as an exciting titillation; who, in the intervals of their various rejections, take short voyages in ships which 'carry a surgeon,' and acquire practice among cabin and steerage passengers; who were accomplished billiard-players at eighteen, and at five-and-thirty have seen a good deal of the world, but know little or nothing of their profession. The type is a well-known one—every man can remember some examples, and every hospital can boast of its specimens. Preternaturally acute in 'catch-questions,' with which they puzzle the first year's students over whose dissections they lounge; accurately informed on 'what Mr. Skey wants about mammary

abscess,' and 'what you must say to South about hernia;' passed many times through the mill and yet still covered with husk; intimately acquainted with the *personnel* of the College; and full of anecdotes of 'Trimmer,' 'Stone,' and how to dodge the registration; these gentlemen are the heroes of the smoking and billiard-rooms, the sign-posts of the hospital vestibule, and are full of confidence everywhere except in the presence of their examiners. They are, however, not abashed by repeated rejections, for which they assign various reasons depending upon causes over which they had no control, and the news that they have been 'spun' or 'tossed' for the fifth or sixth time only inspires them with the determination to have another 'shot,' and to 'fluke through' somehow. The Medical Council, having had their attention called to this element in the natural history of medical students, last year recommended that these gentlemen should be advised to relinquish a profession for which they were manifestly unfitted. The examiners, perhaps from modest doubts of the accuracy, uniformity, and completeness of their tests, perhaps from uncertainty as to the real requirements of professional life, seem to entertain lingering doubts; but they intimate that, at each revival of the courtship, presents must be renewed. There is something inexpressibly amusing in the gravity with which the College has met the recommendation to advise the hopeless blockheads to cease from endeavouring to enter a profession which they are only likely to cumber and discredit, by simply erecting a fresh toll-gate and dipping their hands into the said blockheads' pockets."

A regular system of sessional examinations, such as before detailed, would have obliged such men to have left the profession by displaying their inaptitude for it, and saved them from the waste of much money and some valuable years.

The Royal College of Physicians was chartered by

Henry VIII., through the intervention of Cardinal Wolsey, on the 23rd September, 1522, to six physicians, two of whom were beneficed clergymen. The fellows at first were only chosen from the graduates of Oxford and Cambridge—a strange resolution, as nearly all the first members had graduated on the Continent. This absurd regulation, which degraded the college into a mere club for physicians, was abolished in 1838, after great agitation. This body has often been accused of fostering illegitimate practice by throwing obstacles in the way of licensing; but greatest of commercial monopolies as it was, this charge cannot be substantiated against it, for in the United States, where forty bodies grant qualifications on the easiest terms, quackery thrives apace. The valuable Lumleian, Gulstonian, and Croonian lectures are given in the College in Pall Mall. Its library possesses 18,000 volumes, and its museum some valuable preparations put up by Dr. Matthew Baillie, and those objects which no educated man could behold without emotion—the actual preparations on which the immortal Harvey demonstrated the circulation. The grades in this body are fellows, members, and licentiates.

The University of Oxford was founded A.D. 872, grants the degrees of B.M. and D.M., but owing to the great expense and time—seven years being required for the bachelor's degree—and the absence of efficient clinical instruction, few take its degrees. During 1867 one graduated as M.D., three as M.B., and four passed the first examination. It could not be said until a few years ago to possess a complete medical school. The meeting of the British Medical Association in August, under the presidency of the erudite Prof. Acland, will do much to make the profession aware of the advantages offered by this most honoured of learned seats.

The University of Cambridge also grants the titles of B.M., D.M., and M.Ch., a year in arts and an arts examination being only required. The licences *ad prac-*

ticandum in medicina and *in chirurgia*, established under the Elizabethan statutes, have been abolished. It did not possess a full medical school or opportunities for clinical instruction until very lately, and even still students are advised to study for some years in larger cities. Other branches of knowledge meet more encouragement. Lord Langdale and Barrow entered as medical students, but became attracted to more profitable studies. Five gentlemen received the M.B. at the commencements November, 1867. Such obsolete rules as the necessary lapse of eleven years between the M.B. and M.D. much retarded the success of the medical faculties of the elder universities, but they are gradually being removed. In Cambridge was first introduced the examination by the clinical mode, twenty-seven years ago, by Dr. Paget.

The University of Durham is empowered to grant licences to practise medicine, to obtain which it is necessary to study in a school in Newcastle-on-Tyne (a considerable distance apart from the university). It possesses no schools or museums.

University of London, chartered 1836, is governed by a chancellor, vice-chancellor, and senate, of whom at present one-third are medical men. It confers the degrees of M.B. and M.D., and Bachelor and Master in Surgery, examining for all, and enforcing four examinations at stated intervals. Its new charter enables it to grant the degree of A.B. without any residence or proof of college or school attendance, and it was feared that the same regulation would be applied to medicine. It has no medical, or other schools, nor museums nor library, but such may be provided for in its new buildings now being erected. By the Reform Act, 1867, convocation is to elect a representative in parliament; but it would seem as justly entitled to two members as Oxford, Cambridge, or Dublin.

The Society of Apothecaries was incorporated in 1616,

and licensed practitioners in pharmacy merely till 1815, when shop-apprenticeship being considered an essential part of medical education, they obtained the right of examining and licensing general practitioners in conjunction with the Royal College of Surgeons. As the College of Surgeons now examines in the subjects left formerly to them, and as the Pharmaceutical Society licenses dispensing chemists, it was hard to predict under the Medical Act what would be the place of this body. They have deserted their privilege of examining apprentices and assistants, and have become one of the multifarious doctor-making institutions of the country, as well as the most extensive drug-sellers in England. The licence is still necessary for some house-surgeoncies. It has no museum or library, but has a valuable Botanic Garden at Chelsea.

SCOTCH LICENSING BODIES.

Scotland.—The University of St. Andrew's is the most ancient licensing body in this kingdom, having been founded A.D. 1413 by a bull from Pope Benedict XIII., in compliance with a petition from James I. and the Bishop of St. Andrew's. It was after the model of the University of Bologna, but did much to bring the degree of M.D. into disrepute by giving it without examination, and until 1868, when the Scotch University Commission advised otherwise, without residence; but improvement has taken place in these respects. Ten gentlemen of over forty years may be capped annually although they have not resided, and with this exception there is no university in the three kingdoms which grants degrees without residence. St. Andrew's has no medical school, hence its falling off. By the late Reform Bill but forty-six out of its 1,800 medical graduates would have been enfranchised, for previous residence was essential.

The University and King's College, Aberdeen, was founded A.D. 1494, by Pope Alexander VI. on petition

of James IV. It granted the degrees of M.B. and M.D., residence being requisite. It had an efficient medical school, with the peculiar advantage of a chair of medical logic endowed by a private practitioner, and ably filled by Dr. Ogston. It had no museum. This university was by the Scotch Act amalgamated with University and Marischal College, Aberdeen, and the combined university grants medical degrees after one year's residence in that seat of learning, and another in some other university. For many years it was held up to scorn, with St. Andrew's, as a warehouse for the sale of doctor-dubbing parchment. It has a full complement of chairs, but its museum and medical library are said to be imperfect.

The University of Glasgow was founded by Pope Nicholas on the request of James II. in 1450. It grants the degree of M.D., and residence for one session is insisted on. Since 1815, relying on the power of its charter to grant degrees *in quavis alia licita facultate*, it has granted the title of "magister chirurgiæ," which did not allow practice within the legally assigned limits of the College of Surgeons, Edinburgh, or Faculty of Glasgow; but this restriction was removed in 1850. The university has a medical school of considerable repute, an extensive library, and a museum of 5,635 specimens, including those prepared by William Hunter.

University of Edinburgh was chartered, in 1582, by James VI., but did not grant medical degrees till 1705. It has since then capped 6,631 doctors, the greatest number having been in 1827, when 160 graduated. The average for the last ten years is 75. The practice of giving gold medals for the best inaugural theses is most useful. It requires residence for two "anni medici," the other two to be spent in some university—or two of them may be passed in the school of the College of Surgeons in Ireland. It acquired the greatest fame some years ago, and was almost the only place available for graduation in the United Kingdom for those who

were not members of the Established Church. Some thirty-five years ago its fame was so great that on the establishment of University and King's Colleges in London, Liston, Syme, and Fergusson were selected from it for surgical chairs. It now attracts about 400 students in medicine annually.

The Royal College of Physicians of Edinburgh, in 1681, received a charter from Charles II., granting powers limited altogether to Edinburgh city, and prohibiting it from giving degrees or engaging in medical education; but it has a library of 10,000 volumes and a museum of 2,740 specimens.

The Royal College of Surgeons, Edinburgh, on 1st July, 1505, had "a seill of cause granted by the town counsell of Edinburgh to the crafte of surgery and barbouris." This was confirmed in the year after by James IV. One of its first rules was that no surgeon should take an apprentice who could not read and write. For many years this was the only body in Scotland licensed to distil spirits. It confers fellowships and licences. For many years it had the exclusive privilege of supplying surgeons in a great part of Scotland, but, to its credit be it recorded, it never sought to sustain the monopoly. Its museum contains 6,356 preparations.

The Faculty of Physicians and Surgeons, Glasgow, was instituted by James VI., A.D. 1599, for the purpose of licensing surgeons (medicine not being mentioned) for the "counties of Lanark, Renfrew, Ayr, and Burgh, and the barony of Dumbarton;" but its powers were amplified by an Act in 1850, and its licence is registered and generally received as evidence of qualification.

IRISH LICENSING BODIES.

The King and Queen's College of Physicians in Ireland, founded in 1660 by Dr. John Stearne, was chartered by Charles II. A.D. 1667, and again by William and Mary, A.D. 1692. Its governing body consists of

visitors, president, vice-president, and four censors. It confers the ranks of fellow and licientiate, which do confer exclusive privileges. The examination still is the mediæval method, by *viva voce* question only. As a school it is united with T.C.D. Its library is rich in the older authors. It has no museum.

The Apothecaries' Hall was chartered in 1791, by the Act procured by the famous Dr. Lucas, member for Dublin. Any unprejudiced inquirer will find that this document confers no title whatever to practise physic or surgery, and was alone for the protection of the apothecary in exercising his legitimate duty, that of compounding drugs. It is controlled by a governor, deputy-governor, and court of examiners, fifteen in all, who are likewise shareholders, as the company engage in the commerce of drugs by wholesale and retail. Apprenticeship or pupilage with an English (not an Irish surgeon) is enforced, and before this a full matriculation examination. It has not yet been reported upon by the Medical Council, as the delegates chosen would not attend. The final examination is most searching and demonstrative. In 1853, when the last list was printed, there were 1,372 licentiates, but as only about 30 pass yearly now, the profession is dying out. We have at page 73 suggested some means for improving the scientific trade of pharmacy.

During ten years, ending 1856, 3,037 persons obtained the London and Dublin Apothecaries' licence after apprenticeship (the fee having been said by high authority to average £150). He learns what might, in the establishment of a dispensing chemist, be learned in as many months as he spends years. But the Act of Parliament is evaded, and he often spends four of the five years at lectures.

The University of Dublin, of which Trinity is the only College, was founded by Queen Elizabeth A.D. 1591, under the title of "The College of the Holy and

Undivided Trinity, *near* Dublin." It has been further empowered and enriched by many succeeding sovereigns. James I. gave it the power of electing two members of parliament (the constituency numbering but six). The representation was reduced to one member at the Union, but raised again by the Reform Bill. It was connected with the School of Physic by George III. 40, c. iii. 84, and professors were appointed to deliver lectures conjointly. An Act to amend this was obtained last session, which gave power to make regulations. That made, restricting lectures to three weekly, is most unwise. The actual governing body is the Provost and seven Senior Fellows, with a Senate, which, although originally contemplated and its revival recommended by the commissioners of 1851, only very lately came into operation. During the first quarter of the present century, the examination was the sole test for medical degrees, evidence of school or hospital work not being demanded. It grants the following medical and surgical titles—Lic. Med., Lic. Surg., M.B., M.D., and M.Ch. The two first named should be abolished, as at Cambridge. The expense for the M.B., M.Ch., and previous B.A. is £192 18s. Its educational regulations are admirable, with the exception of those relating to physiology, for the only arrangement apparently made for the purpose of teaching that extensive subject by the aid of chemical appliances, microscopes, and experiments is, that all these topics are to be despatched, along with pathology, in the forty lectures of a summer professorship. Its medical museum has 8,000 preparations, and its library is very large, a copy of nearly every book published in the United Kingdom being obtained free. There are some restrictions as to the admission of students.

Queen's University.—In 1845 the government of Sir Robert Peel—believing that the educational wants of the Irish people were not sufficiently supplied by Trinity

College, and to free dissenters from any disabilities—founded the Queen's Colleges of Belfast, Cork, and Galway, and they were opened for public instruction in 1849. The Queen's University was founded in the following year. It grants degrees and diplomas in the various faculties which other universities grant, except in theology. It is governed by a chancellor, vice-chancellor, and senate of twenty-four. Last year power was given to convocation—that is, professors and graduates of two years standing—to fill six places on the senate according as they become vacant. Two of the senate belong to the medical, six to the legal profession. A medical graduate contested the first vacancy unsuccessfully, because he declared himself in favour of extending the university in accordance with the supplemental charter; but one of our profession will certainly be chosen at the election announced for April. On the London University senate nearly half, and on the committee of convocation, according to bye-law, half belong to the medical profession.

The examiners in medicine, surgery, midwifery, materia medica, law, and political economy are chosen, every two years, usually from members of the professions in Dublin; in all other subjects the examinations are conducted by the three college professors of each subject. It is enforced that a candidate should have matriculated and attended one-third of the medical lectures (which occupies one of the four years required) in a Queen's College. It divides the four years into two periods, each issuing in an examination.

Between 1840 and 1862 fifteen persons were dubbed M.D.'s by the Archbishops of Canterbury, one of the recipients having had no other medical qualification, and having been a notorious quack. The Medical Council most properly refuse to register the title, as they should in the instance just now to be stated.

Honorary degrees in medicine can be registered, but

the universities usually abstain from granting them, except to men already illustrious as medical practitioners. In October, 1866, however, the Queen's University conferred the degree of M.D., *honoris causa* (being the first time it had exercised the privilege), on a gentleman who had not pursued any course of medical education, and for the purpose of enabling him to compete for a chair of botany, for which a medical degree was required. The graduates of that university who had trod a more difficult path before being capped publicly expressed their indignation. The little game did not succeed, for the electors chose a *bona fide* doctor for the chair.

The state of university education is, perhaps, the most exciting topic of the day; but here the only division of the subject interesting us is that of Medicine. Roman Catholics cannot obtain a medical degree in Ireland without studying in the Queen's colleges—to which many of them conscientiously object, as religious instruction forms no part of their system, and for which reason they are condemned by the heads of that church—or in Trinity College, where the highest places are denied to those of their faith, and where the expensive and prolonged arts course must be previously pursued. Again, there is no place in Dublin at which the 400 or 500 students at the other medical schools can graduate, and it is unreasonable to expect them to migrate to Belfast, Cork, or Galway to study medicine. The London University does not supply the want, for, its situation in another country makes it expensive, and if candidates are examined in Ireland they cannot obtain honours. The Catholic Hierarchy demand, as a remedy, that the Catholic University shall be chartered and endowed. Objections to the multiplying of universities and licensing bodies have been previously stated—and it must be allowed that degrees from a new university will not have as much weight with the public as those of an old and famous one, and that competitive

strife between young men of every creed and class, which is so valuable, will not exist. The governing body of the Catholic University is solely constituted by twelve archbishops and bishops. It has been asserted that in no university of ancient or modern times has there been a board so completely ecclesiastical. The regulation of the medical and legal faculties, and the choice of examiners in them, must be managed by the advice of one or more of the professors of each, who can be scarcely regarded as responsible or disinterested. If only those students who were educated in its medical school were eligible for the degree of M.D., those attending the school of the College of Surgeons, for instance, where the library and museum are at least superior, would be placed under disadvantage; and this is the very institution in which the students of the Catholic University have hitherto enjoyed great advantages. By a supplemental charter, granted to the Queen's University in 1866, many of the difficulties of Irish education were proposed to have been removed: students from other colleges recognised by the senate, besides the Queen's Colleges, and from medical schools, were to be admitted to degrees. The plan had been forcibly advocated by Sir D. Corrigan, and was identical with that of the London University when first founded. This institution has always received the fullest support from the many admirable Catholic colleges which flourish in England. The Calcutta University, constructed on a similar plan, has been most successful. This supplemental charter, not having received the sanction of Parliament or the approval of the graduates of the university, mainly owing to the way it was introduced, was after much litigation abandoned, and the question remains unsettled.

The great majority of Catholic laymen and liberals earnestly hope that Mr. Monsell's proposal shall be adopted by the government. According to it, the

Dublin and the Queen's Universities would be abolished, and a National University created, of which Trinity College, the Queen's Colleges, the Catholic University College, and perhaps some other institutions, should be all colleges governed as at present, and suitably endowed. The senate of the university should be constructed so as to fairly represent all these separate institutions.

The opposition to this plan mainly proceeds from Trinity College, and is expressed in a pamphlet by the Rev. Prof. Haughton, written with all the force and caustic wit which that extraordinary man possesses. It is, however, but a selfish appeal to let his college alone on the ground that it is not national, but for a "handful of Protestant clergymen." If such be the character of Trinity College, the expected Reform Bill may fairly diminish its parliamentary representation, and give at least one of its members to the seats of more liberal education. If the interests of his own college are safe, he is indifferent as to the chartering of a university for other creeds. In a letter to the *Medical Times and Gazette*, and subsequently in his pamphlet, he asserts that "the standard of the new university degrees would of necessity take its character from that of the lowest of the colleges admitted into partnership, just as the manœuvring of the whole fleet depends on the sailing qualities of the slowest tub in the squadron." That the tendency would be in the opposite direction the instances of Oxford, Cambridge, and Paris universities indicate, but is clearly proven by the London University, whose medical degrees are the most honourable in the world, owing to the high standard of examination which is enforced. It is indeed to be regretted that one so pre-eminent in physical and medical science as Prof. Haughton should be the most powerful advocate of sectarian monopoly. No one is in all things or at all times wise. Nevertheless, so great is his genius, and so useful would it prove in the Senate, that we ear-

nestly hope to see him returned to parliament as soon as the restriction against clergymen is removed.

That such a plan is feasible will be allowed when it is remembered that in continental universities—Bonn, for instance—Protestant and Catholic colleges, with theological faculties in each, are united. Disputes as to the choice of subject could not arise, and if the senate selected several works on each subject, no candidate for examination would be obliged to study a book disapproved of by his church. The examiners should be chosen indiscriminately from the professors of all the affiliated colleges, or, what is far better, from the learned world at large; and senators should never be chosen on political grounds.

It is a great error in the Queen's and Dublin Universities that the examiners are the professors, who are allowed thus to be the vouchers of their own success. As failures in the candidates passing must do injury to the professor's repute, must he not be expected to be over-indulgent? The selection of an independent staff of examiners, on the ground of merit alone, and not because connected with institutions it is politic to propitiate, would do much to increase the value of these degrees.

It is certain that the Queen's University, as at present constituted, will never become a popular institution in this country. It is too directly connected with the government of the country to be self-reliant and independent, as a great centre of learning should be. It was promised that after a few years the professorships should cease to be political appointments, but the promise has not been fulfilled. It has most highly trained a great number of professional men, and in one leading intellectual position, the bar, its graduates are allowed on all hands to supply the "rising men." The Rector of the Catholic University condemns the Queen's University, yet three of his professors hold offices in it; and he objects to the College of Science as infidel and alien,

although one of the Catholic University professors of pre-eminent ability teaches also in it, and only three out of the eight literary chairs in his own institution are filled by Irish gentlemen. The principle of giving degrees in arts, as in the London University, without study at any college was advocated in regard to medicine by Adam Smith in 1774: "When a man has learned his lesson very well, it surely can be of little importance where or from whom he has learnt it." If final examinations were thoroughly practical and demonstrative, there would be no objection, to the same free-trade practice in medicine also; but even in the London University, where the examination tests partake of those characters more perfectly than in any other body, attendance at recognised schools and hospitals is insisted on.

The unfettered and unaided competition which it is the object of the "Wealth of Nations" to uphold, may serve the public in regard to mechanical and commercial pursuits, for they can judge of the ability of those who follow them; but with regard to medicine, of which such ignorance prevails, the case is wholly different.

A National University receiving on equal terms those educated in Trinity College, the Catholic College, the Queen's Colleges, and other recognised schools, all of which institutions would be controlled by independent bodies, would foster intellectual competition, and as there is nothing dwarfing or repressive in the Catholic faith, those who profess it would gain more by this ennobling strife than by any separate charter.

ROYAL COLLEGE OF SURGEONS.

To avoid repetition it seemed most suitable that any remarks on the management of corporate bodies should be made specially of one, and that which it was most natural to select was the Irish College of Surgeons. Many of its rules which could only be talked of in terms of praise are not commented upon, and some others are

censured; but it must not be interpreted from such criticisms that disrespect is intended. A guild of barber-surgeons in Dublin was instituted by charter in 1446, but the Royal College of Surgeons was not incorporated until the 11th February, 1784, by a charter from George III. granted to "Henry Morris, William Ruxton, George Daunt, Samuel Croker King, Gustavus Hume, William Dease, James Henthorn, and others," to improve surgical education and the licensing of practitioners. The only professorships first founded were anatomy, surgery, and midwifery, but the number was almost immediately increased. Among the honorary fellows shortly enrolled were Percival Pott and John Hunter. The powers were much amplified by a charter granted 19th September, 1828, on the relinquishment of the old. It constituted the following grades—president, vice-president, censors, assistants (the foregoing formed the governing body and were elected by the next rank), members, and lastly licentiates. The censors were allowed to admit by examination such candidates as had complied with their regulations, apprenticeship being no longer necessary. The apprenticeship system had had the effect of driving candidates to English and Scotch colleges, so that only one-fiftieth of the Irish practitioners belonged to the Dublin college. Now, out of 2,721 nearly half belong to the college. Carmichael, although receiving at the time very large apprentice-fees, was the first to propose the abolition of this monopoly. They were also to control by oaths, declarations, and by punishments. The powers of the college were still further re-modelled and extended by a charter (24th January, 1844) from her present Majesty. The title "fellow" was substituted for that of "member;" the government was placed in the hands of a council of twenty-one elected annually by the fellows. This council appoints, by seven of its members chosen by ballot and bound by the most solemn declarations, examiners for

the licence and fellowship, and thirteen professors of the school of the college as vacancies occurred. Election by the whole council present would be far preferable. Licentiates of this and other colleges, of whose qualifications the council approved, were admitted as fellows for one year from date of charter without further examination. The fellows were to be the corporation, but the exercise of its powers was to be vested in the council. Examiners were not to be teachers except in hospitals. They are elected by the council, most of whom are connected with schools; but the election to that body of a private teacher was opposed by an examiner on the grounds that it imperilled the independence of his office. Fellows were not to practise pharmacy; all office-bearers, fellows, and licentiates were to make solemn declarations. Its educational requirements are tabulated on a following page, as well as the method of its examination, and it must be acknowledged that it does not suffer by the comparative view. The number of fellows is 395, and of licentiates 1,791. The income of the college was last year £3,806; the building is magnificent, having cost over £40,000. Its means of teaching are a large and valuable museum, containing 5,716 preparations, illustrative of anatomy, physiology, human and comparative, and of medical and surgical pathology; a valuable library of 14,742 volumes—and additions are being made daily from the general and professional literature of the day. Within the college walls there meets the "Surgical Society of Ireland," previously noticed. There is also a school of all branches of the medical science, under the immediate control of the council, and which has been spoken of under the head of medical education.

The office of Surgeon-Extraordinary to the Queen, vacant by Dr. O'Beirne's death, and the post of Surgeon-General, have been abolished in Ireland, while in Scotland there are two Surgeons-Extraordinary to the

Queen, and in London five. When a distinguished surgeon is leaving the President's chair, would be a fitting time to confer this honour.

To analyse and systematise the bye-laws and ordinances of council will be the purpose of the next few pages, the latter rules being arranged according to the subjects of the bye-laws.

General.

1. Confers a seal to be affixed to diplomas and public acts of college. 2. Councillors to assemble periodically by summons, those absent being fined. There could be no objection to fellows being present at council meetings—such is the practice in the Royal Dublin Society and some other bodies. 3. Chairman to regulate proceedings. (Ordinances of council prescribe the course of business, and subdivides the council at present into finance, museum, library, and inspection committees.) 4. Fellows or licentiates guilty of perjury to be expelled. 5. Officers to take the prescribed oath. 6. Confers honorary fellowships free, but without corporate privilege. 7. Secretary of college to be elected by fellows; secretary of council by council; both to be fellows. 8. Council shall elect registrar, who must not be a fellow or licentiate. 9. Council annually to elect a fellow as librarian. Considering the trouble the office gives in selecting the best books and in correspondence, it should be a paid office. The council also appoints and directs a curator of the museum, who shall not be a councillor or teacher. Complete labelling and a new catalogue are sadly wanting.

10. The professors of anatomy and physiology, practical and descriptive anatomy (2), surgery (2), chemistry, physic, materia medica, midwifery, medical jurisprudence, botany, and hygiene shall hold office during will of council. Notice of vacancy to be inserted thrice in two Dublin newspapers twenty-eight days before election. Chairs of ophthalmology and psychology are much called for.

Lord St. Leonards encouraged the latter subject by founding a prize. The syllabus or testimonials of candidates for all professorships should be published among fellows, by placing a copy in their room. 11. Any member of council must resign fourteen days before election if he seeks a professorship. 12. On first Tuesday in May annually council to elect three examiners in medicine and surgery, two in anatomy and physiology, one in chemistry, materia medica, and medical jurisprudence, and one in midwifery. An ordinance directs annual election of examiners from fellows, half-guinea being fee for each candidate if present on both days. Two councillors to attend, who, by recent rule, are paid similarly. Examiners reported by "yes" and "no" till last year, when fifteen was settled as the maximum mark for each; no candidate to pass who had received 0 from any, or less than one-third from all. In 1849, the council advised that five years should be the longest tenure of the office of examiner. In 1853, the very unwise step was taken of electing the seven examiners in all subjects generally; three examinerships in midwifery were established. All the subjects on which lectures must be paid for should be examined, or else they will be neglected. The examiners, in conducting the *viva voce* part, should speak aloud, and require candidates to do likewise, else the publicity is only nominal.

The appointment of examiners—a trust of the highest responsibility—is reposed in the council. The qualifications of examiners should be most unexceptionable. In this college they are prohibited from being teachers. Now, this, I think, although far wiser than having them all the professors of the same institution, is yet capable of some modification. An examiner who is not, or has not been a lecturer or catechetical teacher, will find it hard to suit himself to the capacity of the candidates. He will either be too easy, or, what is much more frequent, puts questions which, from abstruseness or want of perspicuity in putting them, are altogether un-

suited. Besides, he is compelled to make up some certain branch, and will be unwilling to travel beyond it. This is manifestly objectionable. The Examinations Committee of the Medical Council have recommended, "There should be some teachers in every examining board." It might be feasible to select the examiners from each educating body, or to have them chosen from a list of names proposed by a committee, embracing representatives from all the schools in equal numbers. The hospital teachers should be arranged in like manner, and their selection made by the council. Under a new charter, the fellows might annually elect some of the council to act as examiners in addition. The objection that teachers, if examiners, favour their own pupils has little weight, as it pre-supposes want of conscience, and want of respect for oaths or declarations which never could be attributed to these gentlemen. Under the old charter, and still in the London college, some of the examiners are teachers, and no injurious results have followed. However, for many reasons, the examiners being solely professors of the same establishments is very improper. It tends to depress the standard of requirements, and to make the examination less solemn and unexceptionable. It was the practice of professors at Dublin and Edinburgh Universities examining candidates at their own houses, which rendered teachers unpopular as examiners. Examinerships should be terminable, as the examiners become routinists, and their "tips" get too familiarly known. The self-elective system of the London college is notorious. Examiners should be paid by salary, not by the number they pass.

13. Examiners must be fellows; professors must have medical qualifications. (Some of the most able chemists and botanists would be hence ineligible.) 14. No dividend, &c., shall be made between the fellows. The stated meetings of the college are—first Tuesday in May, to elect examiners; last Monday in May, to receive annual report; and first Monday in June, to elect officers.

Educational.

1. Pupils shall be registered for £5 5s. This sum counts in the licence fee, and confers the privilege of reading in the library and studying in the museum, which can be otherwise obtained, and the regulation might be well erased. 2. Qualifications for licence. 3. Qualifications for fellowship. (Those will be set forth in the table on pages 210-11.) County hospitals may be attended for the summer months. It has been often urged that fellowships should be given by ballot, but such election confers no honour, and in another College of Surgeons is much abused. The admission of fellows on the reception of the new charter has been often regarded as most objectionable, but it was an effort to establish professional uniformity. A somewhat similar co-option of 300 fellows out of the 1,250 members of the London College of Surgeons took place in 1843, on its receiving its new charter, but great clamour having arisen among the disappointed, another batch of 242 was created. 4. Fellows or licentiates shall be examined for diploma in midwifery if they produce certificate of practical midwifery.

As the calling of the dentist is so disorganised in Ireland, and as the public have no means of judging whether a person who assumes the title is really qualified or not, it seems very desirable that the College of Surgeons should grant a diploma in dental surgery, following the example of the London College, and of the authorities in almost every European capital. It may be said that dentists can take the ordinary diploma, as some have done, but the expense and time are too great, and the education is not special enough for their pursuit. The following certificates should be required—1. Of having been three years engaged with a competent practitioner in learning mechanical dentistry. 2. Of having attended the practice of a recognised hospital,

with which a dental department is connected, for twelve months. 3. Of having attended the following courses of lectures—anatomy and physiology, surgery, medicine (during the first winter session), practical chemistry including metallurgy, materia medica (during the summer session), structure of the teeth of man and lower animals, and dental surgery (during the second winter session). 4. Of having performed a course of dissections during the second winter session—the certificate to give evidence that the anatomy of the head and neck has been, at least, twice carefully dissected.

The examination for the diploma should be conducted by oral and written questions, and by demonstration, by three members (in turn) of the examiners for the surgical diploma, and by two examiners versed in dentistry, and among the fellows of the college many such are to be found; but after five years they should be chosen by the dental diplomates. The diploma fee should be £10 10s., and if the hospital and schools charged the usual fees the other expenses would be £39 18s. Dentists already in practice should be admitted after attendance on the second year's course, and by a modified examination. A considerable number would annually present themselves for examination, for there are in Dublin alone over 100 practising dentists, and about half as many apprentices. Ten gentlemen obtained the diploma in London last year.

5. (*a*) Candidates for licence shall be examined by at least five examiners, in anatomy, physiology, medicine, surgery, materia medica, and prescriptions, performing operations or dissections, explaining anatomical or pathological preparations. If they fail, they shall not be readmitted for six months. The examination should include practical pharmacy, especially if the candidate is to engage in general practice. Licentiates have often lost repute by their prescriptions being shown about by compounders or by patients, who are apt to proclaim errors.

(*b*) Candidates for fellowships shall be examined in the same way, the president or vice-president and two councillors being present, operations and comparative anatomy being added, and written papers being obligatory. Re-admission after one year.

Brodie expressed a strong opinion that the licence examiners should not expect that a man will be perfect at the outset of his career; but for fellowship, evidence of the highest proficiency should be given.

(*c*) Candidates for the midwifery diploma shall be examined by the examiners in midwifery, and in anatomy and physiology, and shall be re-admissable in three months.

The arrangements for the quarterly examination being novel, it may be well to quote them in full. "1st. examinations shall be held quarterly on the second Tuesday in February, May, August, and November, at which candidates shall be divided into two classes—junior and senior. 2nd. The junior class shall produce certificates of having attended three courses of lectures on anatomy and physiology, three courses of lectures on practical anatomy, with dissections; two courses of lectures on chemistry, one course of lectures on materia medica, one course of lectures on botany, and one course of lectures on forensic medicine. 3rd. This class shall be examined in anatomy, physiology, and materia medica. 4th. The fee for this examination shall be five guineas; not to be returned in case of rejection, but to be allowed in the fee for the second examination. 5th. The senior class shall produce certificates of having attended three courses of lectures on the theory and practice of surgery, one course of lectures on the practice of medicine, and one course of lectures on midwifery; also certificates of attendance on a recognised hospital for three winter and three summer sessions. 6th. This class shall be examined in surgery, operative surgery, the practice of medicine, and form of

prescription. 7th. Both of these examinations shall be partly written and partly oral. 8th. The fee for this examination shall be fifteen guineas.

FEES.—1st. The candidate pays ten shillings for his preliminary examination. 2nd. Five guineas as registered pupil of the college. 3rd. Five guineas for the junior class examination, which is not returned in case of rejection, but is allowed in the fee for his second examination. 4th. Fifteen guineas for the senior class examination—total, £26 15s. 5th. Every candidate rejected at the quarterly examinations shall be required to pay to the College the sum of two guineas on applying for re-examination, so as to recompense the college for the necessary expense."

Regulation of Schools.

1. School of college to be controlled by council.

2. Certificates to be received from other schools sanctioned by council—(*a*) if in return they receive their certificates; (*b*) if the teachers lecture on but one subject as usually allotted; (*c*) if lectures on anatomy and physiology be delivered five days weekly, or on surgery three days weekly, between October and May; (*d*) if the lectures on medicine, chemistry, materia medica, midwifery, and medical jurisprudence, number sixty each; (*e*) if the courses of dissection last six months; and (*f*) if the lecturers be qualified in opinion of council.

There are some clauses of the charter which many fellows think should be altered—the necessity of personal attendance for voting, the election of officers by a third instead of the whole council, and that incapacitating councillors from being examiners, for instance. But such may be well postponed till the time of a general reorganization of the profession shall arrive.

It will be seen by the table on pp. 210-11 that, exclusive of the Pharmaceutical Society for the licensing of dispensers, there are in the United Kingdom nineteen bodies which grant licences, diplomas, and degrees, en-

titling the holder to enter them in the medical register, and practise medicine and surgery. As many of them grant several kinds of qualifications—the University of Dublin, for instance, 5—there are 54 various documents which may be presented as evidence of right to practise. These licensing bodies are fed by 33 recognised schools and nearly twice as many hospitals. These 54 qualifications do not include midwifery testimoniums, of which there are 6. The United States is often accused of a great multiplicity of medical bodies; but in proportion to area, general population and educated population, they are fewer than in these kingdoms, and, besides, the title universally conferred is that of "M.D." M.B. was conferred by some colleges up to 1812, but a separate surgical diploma has never been issued. All ours differ very materially in their educational regulations, and thus vie with each other most injuriously. Some of them hold out lower terms, which are sure to attract the idle and imperfectly educated. Justly might Mr. Carmichael apply the term of "Dutch Auction" to this state of things; and might Professor Grant exclaim, "The existence of so many licensing bodies is an absurdity of legislation unparalleled in the history of any civilized country, the most ruinous to the best interests of society, and the most injurious the human imagination could devise to the respectability and usefulness of the medical profession." An eloquent lecturer in 1857 said, "Step by step each college descended below its neighbour in the sliding-scale, till it has come to this, that now a candidate rejected at one college has beforehand prepared for his immediately setting out for the next lowest in the scale that will gladly sell its diploma on easier terms. This is the present state of things. Who is to blame for this? Neither students or colleges, but a higher power still—the legislature, that permits this discreditable state of professional education and examination to continue."

Qualifications (*by Initials.*)	No. of Courses.												No. of months			Fees.	Examiners.	Method of Examination.
	Physiology.	Anatomy.	Surgery.	Physic.	Chemistry.	Mat. Med.	Jurisprud.	Botany.	Zoology.	Nat. Philos.	Midwifery.	Hysteria.	Hospital.	Midwifery Hospital.	Pharmacy.			
Ireland.																£ s.		
L.R.C.S.	3	3	3	1	2	1	1	1	..	..	1	..	27	..	.	26 5	Special.	Writ. & oral & practical in Surgery & pharmacy.
F.R.C.S., same with addition ..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..		
L.K. and Q.C.P., ...	1	1	1	1	2	1	1	1	..	..	1	..	27	..	..	21 0	Do.	Do. do. & oper.
F.K. and Q.C.P., by ballot ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15 15	Censors.	Oral.
Lic. Med. T.C.D., }	1	2	1	1	2	1	1	1	..	..	1	..	18	.	..	..		..
M.B., do. }																{ 5 0	The professors.	Oral and written
M.D., do. after lapse of 3 years ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	{ 10 0		..
Lic. Surg., do. }	2	3	2	1	2	1	1	1	..	..	1	..	27	..	..	13 0		..
M. Ch., do. }																{ 10 0	„	Oral, written, & operations.
M.D., Q.U., }	2	2	1	1	2	1	1	1	1	1	1	..	24	..	..	{ 15 0	„	
M Ch., „ }																{ 5 0	Half profs.	Oral and written
L.A.H., ...	2	2	1	1	2	1	1	1	..	..	1	..	18	6	36	{ 5 0	„ special Examins.	Do. do. and operations.
England.																0 16	..	Oral, written & demonstrative.
M.R.C.S., ...	2	2	2	1	1	1	1	..	..	..	..	..	24	..	3	22 0	Com. of Council.	Oral, written. & demonstrative.
F.R.C.S., addition of operations, practical chemistry, and .. }	..	..	..	..	..	..	..	..	..	..	..	..	24	.	..	31 10	Do.	Written and demonstrative.
M.C.P., ...	2	2	2	2	2	1	1	1	..	..	..	1	27	..	3	31 10	Censors.	Oral writ. clinic. & demons.
L.C.P., same as membership	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15 15	Special.	Do. do.
F.C.P., by ballot	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		..
B.M., Oxon., residence and progressive courses and examinations, ...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Professors	Oral, written, & demonstrative.
D.M., by reading dissertation after lapse of 3 years	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..
B.M., Cantab., residence and progressive courses of examinations, ..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	Professors	Oral, written, & demonstrative
D.M., Cantab., the expense being about £150 a-year, but there are numerous																		

M.Ch., ...	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Professors	Oral, written, & demonstrative.
M.B., London, ...	1	2	1	1	1	1	1	..	1	..	1	1	24	6	6	5	0	Special Examins.	Do.
M.D., do., subsequent to M.B. ..	..	..	..	..	..	..	..	..	..	..	..	..	24	..	..	5	0	Do.	Oral and written
Bach. Sur. do. same as M.B., operations being added, ...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	0	Do.	Do. & clinical.
Mast. Sur. do., subsequent to B.S. ..	.	..	..	..	..	..	..	..	..	..	..	..	24	..	..	5	0	Do.	Do. Do.
Lic. M.D., Durham, four years study, and residence at Durham for M.B., and M.D. for 2 years ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		Special.	Oral, written, & demonstrative.
M.B., Durham	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		Do.	Do. Do.
M.D. do., ...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		Do.	Do. Do.
M.Ch., do., ...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		Do.	Do. Do.
L.S.A., ...	2	2		2	2	1	1	1	..	..	1	..	24	6	60	6	6	Proprietors.	Oral and written.
Scotland.																			
L.C.P., Edinburgh	1	1	1	1	2	1	1	1	..	..	1	..	24	6	3	10	10	Censors.	Do.
M.C.P., do., by election	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	31	10	..	..
F.C.P., do., do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	56	10	..	..
L.R.C.S. do., ...	1	2	2	1	2	1	1	..	..	..	..	..	24	3	3	10	0	Council.	Oral and written.
F.R.C.S. by ballot, any surgeon being eligible	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	25	0	..	.
L.F.P. and S. Glasgow .. .	1	2	2	1	1	1	1	..	..	..	1	..	24	3	3	10	0	Special.	Oral, written, & clinical.
F.F.P. and S. do., by election as physician, or as surgeon of any previously qualified	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	40	0	..	..
M.B., Edinb., ...	1	1	1	1	2	1	1	1	1	..	1	..	24	6	6	15	15	Professors & 3 others	Oral, written, & demonstrative.
M.D., do., 2 years subsequent to M.B.,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15	15	Do.	Do.
M.C., do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	5	Do.	Do.
M.B., Glasgow, ...	1	1	1	1	2	1	1	1	1	..	1	..	24	3	3	15	15	Profs. and Assessors.	Oral, writ. clinic. & demons.
M.D., do. 2 years subsequent to M.B.,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.	15	8	Do.	Do.
M.C., do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	5	..	..
M.B., Aberdeen, ...	1	1	1	1	1	1	1	1	1	..	1	..	24	3	3	15	15	Profs. and 3 others.	Oral, written, & practical.
M.D., do., 2 years subsequent to M.B.,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	5	Do.	Do.
M.C., do., same as M.B., ...	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	5	5	Do.	Do.
M.B., St. Andrew's, ...	1	1	1	1	1	1	1	1	1	..	1	..	24	3	3	15	15	Special.	Oral and written.
M.D., do. 2 years subsequent to M.B.,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	5	..	..
M.C., do. same as M.B.	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	5	5	..	..

The only improvement since effected is the practice of some bodies making returns to the others of the candidates they have rejected. The ablest article on medical education which has probably ever appeared may be found in the *Westminster Review* for July, 1858 (just before the creation of the Medical Council), and it thus concludes: "The proposed Medical Council will centralize and consolidate the power of the corporations; while the 20,000 constituents of the profession, who by their struggles have extorted whatever improvements have hitherto been effected, are still to be denied a voice in the constitution and administration of their own government, in the education of their own members, and in the appropriation of their own funds! The alleged advantage of this despotism is, that it will secure an uniform minimum education, a right to practice throughout the United Kingdom, and a registration of qualifications. The first would, as we have shown, be a great evil; the second now virtually exists, and would do so legally if the State would withdraw its present protection; and the third is accomplished by the Medical Directories, which are everywhere obtainable for a few shillings." The Medical Council is indeed but a corporation of corporations.

The great statesman, Sir R. Peel, as early as 1818, said in the House of Commons, "It was natural to suppose that a competition would soon be entered into between the several bodies who had a power to grant licences for the purpose of procuring the greatest quantity of fees."

COMPULSORY STATE EXAMINATION.

So numerous, then, are medical qualifications, that the public have no criterium of competency, except registration as a practitioner—no way of distinguishing between those really worthy and those, from insufficiency of education and examination, comparatively worthless, whom they accept with child-like trust.

The choice which will be made between easy and difficult examinations may be judged of by the registries of last year—viz., 845 who had taken the College of Surgeons diploma, 191 that of the Hall, and 12 the degrees of the London University, the only reliable test of proficiency. In addition to our own qualifications, crowds of foreign ones used to be foisted on the public, and some of these were so much a matter of purchase that the pleasantry related of Rabbelais (who, by the way, was a physician) getting a doctor's degree for his nag, under the title of "Dominus Caballus," may have been no baseless sarcasm. Sir D. Corrigan lately exposed the diploma trade; and even allowing that American and Continental diplomas were only granted after due examination, there is such difficulty in proving that they are presented by the person to whom they were granted, that they should not be registered at all, or only as additional qualifications to those who had registered some British qualification. It is highly desirable that some remedy should be applied for this great evil, a want of uniformity. The conflicting interests and vested rights of the licensing bodies will, perhaps, prevent any attempt at diminishing their number, and from variety of existing circumstances their examinations can never be made uniform by reference to the Secretary of State or otherwise. The Medical Council decidedly have the power of recommending the disfranchisement of any body not fulfilling their requirements, but as at present composed they will scarcely suggest this self-immolating process. The only way of obtaining anything approaching to equality of examination will be to compel every one before or after obtaining any diploma or degree, to submit to another trial, precisely similar for all, and held in each metropolis of the United Kingdom. This final test would be found to press hard only on those who from the insufficiency of the previous examination

were really unfit for practice, for to those well prepared no repetition could be a hardship. This measure (unlike one proposed some years ago) should not be retrospective, and only applicable to those candidates who should present themselves two years hence for licences. The State examination would be popular with the profession; in 1845, 5,000 practitioners spontaneously organised the "National Institute of General Practitioners," and demanded a uniformity of qualification.

Such a course is pursued with the most decided benefit in Germany since 1685, when the *Collegium Medicum* was established. There the "Staats Examen" tests every graduate or licentiate before he is allowed to practise. In Berlin a minister of state and a number of physicians form a kind of medical hierarchy. Medical degrees are there but honorary titles. It would be probably unnecessary for the public services where such stringent examinations already exist, except for Poor Law services. It would be most desirable, for many reasons, that the medical relief of the country should be given by an organised body of officers, somewhat similar to the constabulary system. No candidate could offer himself till after he had obtained some diploma or degree. The details of such an examination, as regards its general and practical character, have been previously developed. Its conduct and the selection of examiners should be vested in the Medical Council. Sir D. Corrigan has already proposed that "the branch councils should appoint a board of examination for each division of the kingdom, and give to each candidate who passed a certificate to that effect." The revenue from the fees for the state examination should be fairly divided among the licensing bodies to support museums and libraries, or endow them as great teaching institutions. Before the passing of the Medical Act, some of the Scotch reformers, Mr. Syme for instance,

in his "Letter to Lord Palmerston," advocated a minimum qualification for all who sought admission to the profession.

It has been previously shown that the profession offers fair and honourable recompense, and all that it needed to elevate its tone and position is a much increased standard of education, preliminary as well as technical, and a more sound and appropriate system of sessional and final examination.

I would have the controlling power over these state examinations solely vested in the profession. The lawyers are governed by the Benchers, the clergy by the Bishops, and there seems as little reason for extra-professional interference in ours as in these high callings.

It might be better to enforce the passing of the state examination before those in the present licensing bodies, as some, after having passed the latter, would practise in spite of the laws, and would have a right to the titles at present conferred. It will be always well that there should be a higher grade in medical titles, so as to stimulate the ambition of the junior practitioner—somewhat analogous to the titles of Q.C. or LL.D. in the law, which are additional to licence for practice. They should be of two kinds—1st. The doctorate of medicine in the universities. We would insist with Prof. Stokes, who has convincingly shown the advisability of the measure, that graduation in arts should always precede that in medicine. 2nd. The fellowship of the Colleges of Physicians and Surgeons, these bodies having been united in each metropolis. This distinction should be only obtainable by examination, or else it is valueless; moral qualification could be estimated by allowing five years to elapse after the state examination, and candidates should submit reliable recommendations from distinguished members of the profession.

The money test has always proved a most imperfect

one for the admission of members of colleges. In old time colleges of physicians exacted sums reaching £100 for admission, and when the graduates in medicine of the university of the same city were anxious for admission into one of them, it was announced that "half the amount in cash, and the remainder in approved bills at twelve months date," would be accepted. The fee for the fellowship of the Edinburgh College of Surgeons up to 1827 was £250 to non-apprentices. This honour is now dispensed very cheaply to practitioners if recommended, although they may have passed no examination in that college. On the other hand, the admission of fellows into another Royal College for a moderate sum upon the taking of a new charter, although it may have replenished the coffers, greatly lowered the institution in respectability.

The higher qualifications should be insisted on for hospital or college appointments, but the distinction would by no means create, as once urged, a doctor for the rich and a doctor for the poor.

Dr. Burrows, in his evidence in 1848, cited the remark of a country fellow about a doctor: "He is so much of a gentleman that I do not like to go to him." Commenting on this, an article in the *Westminster Review*, attributed to Sir B. Brodie, with great severity remarked: "Judging from the general want of preliminary education, the kind of pleasures, and the prevailing tone of mind which characterize the majority of medical students at the London schools, we imagine that the simplest of the vulgar will long continue to discover points in common between himself and his doctor."

The examiners from the boards of the three kingdoms should interchange occasionally, as in no other way could a uniform standard be preserved. We have sufficiently dwelt on the appropriate mode of testing practically a candidate's fitness for practice, but we are not

so sanguine as to hope that it will ever be so perfect as to render it unnecessary to oblige the student to pursue any course of study in hospital and dissecting-room, for instance. Mr. Simon, it would seem from the following extract, thinks the examination test all-sufficient: "Judge the question by the analogous case of a recruiting officer for the army. He does not require a long schedule of his man's antecedents of diet—what oatmeal he ate in his childhood, and what eggs afterwards, and whether his beer was from 'recognised' publics, and what previous notice was given of his several meals, and which were taken sitting and which standing. No; he makes his estimate of the bumpkin, such as he is, goes with thorough care over all his points, strictly judging his thews and sinews, and accepts or rejects him accordingly. The candidate for a medical licence in any country has, I think, a moral right to demand from the State this sort of examination of his merits—has a claim, I think, to be let stand or fall according to the essential fact whether he is competent to practise his profession, not according to inessential and trivial circumstances of how or when he has learnt this or that part of his business. He may fairly make appeal to 'results;' and if regulations are thrown into his teeth, he may fairly answer, as Mrs. Glasse did to Scholasticus, 'the proof of the pudding is in the eating.'"

Medical titles are so varied that the public do not understand them. Some of them are excessively long, and if a gentleman qualified as a physician and surgeon in Dublin, for instance, signs L.K. & Q.C.P.I., and L.R.C.S.I. after his name, he is sure to be ridiculed.

If amalgamation of the licensing bodies can be effected some short title should be chosen, and M.D. would be the most suitable and popular. The State would surely legalise the granting of such a title, the more so as it would be only retaliation, the universities having of late years assumed the giving of licences, diplomas, and

masterships in surgery, besides medical degrees. If the title of *Medicinæ Doctor* could not be legally conferred, the letters M.D. might still be, if they were to imply "medical doctor," or "medical diplomate." At present the title of "Dr." is conferred on all medical men, whatever their qualifications, and is frequently adopted by practitioners who have no university degree; for instance, in the programme of a Dublin hospital, the two physicians and the four surgeons are each set down as Dr., while only one of them—a surgeon by the way—has a university degree. The only bodies, so far as I am aware, which discountenance the practice are the London University—"The Senate desire it to be understood that Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine"—and the London College of Physicians, in which there is a by-law prohibiting any member from using the title of "Dr." unless a graduate in medicine.

If the State examination in each metropolis were established, there would be no need for the Colleges of Physicians or Surgeons to grant primary qualifications, or still less for the universities to issue their inferior licences; the former should confer the fellowship alone, and the latter the doctorate.

AMALGAMATION OF LICENSING BODIES—CONCLUSION.

If, however, vested interests should render the foregoing scheme impracticable, combined examinations, if not complete amalgamation, can be accomplished—and first as regards Ireland. The union of the universities and the conversion of the Apothecaries' Hall into a Pharmaceutical Society having been discussed, it only remains for us to offer some suggestions for the combination of the Colleges of Physicians and Surgeons. Fees, it is thought, will be the main difficulty. The College of Physicians receives fifteen guineas for its licence, the College of Surgeons twenty-five; let the fee for the

double qualification be fixed at thirty, and let one-third be for the College of Physicians, two-thirds for the College of Surgeons. Although there is a greater proportional reduction for the former body, it will really gain, for having the Universities and Apothecaries' Hall as rivals in medical licensing, it only passes one-third as many as the College of Surgeons. The addition of its four censors to the seven examiners of the College of Surgeons would make an admirable examining board. Considering the larger building, and facilities for the demonstrative methods which museums and dissecting rooms afford, the examinations should be conducted in Stephen's-green.

In Scotland, combined examinations have been established for some years, but separate medical and surgical licences should not be granted, and the Glasgow Faculty should be absorbed in the Edinburgh College under the title of the Royal College of Surgeons of Scotland, as it is absurd to have two similar bodies within fifty miles of each other.

In England during the present year a similar arrangement between the Colleges of Physicians and Surgeons is to be commenced, and we trust will lead to the relinquishment of separate diplomas. A candidate who passes this examination will be qualified in all branches, whereas there are 3,000 members of the London College registered who only have been examined in anatomy, physiology, and surgery. The London University should still continue to grant its most admirable degrees, but those in surgery it might well abandon. There are great difficulties in the way of the earnest student who wishes to take the degree of the London University as well as the necessary diploma of the College of Surgeons, for the curricula are most differently arranged. The former great body might, as regards medical examinations, combine with the others.

Let me again advocate the indivisibility of medicine

and surgery, and urge that they should be always taught in the same hospital and the same school, and the distinctions between them obliterated as much as possible by a compulsory examination embracing both, and forming the sole portal to the profession. The re-union of these long-estranged sisters seems to have been regarded approvingly in a forcible address delivered by Professor Stokes during the present month: "It is anticipated by some thinking men that the time is coming when the artificial or the corporate divisions in medicine will cease to be, and then the classifications into physicians, surgeons, and general practitioners, and obstetricians will be a thing of the past. But there will be a distinction marked by no feeble or uncertain line between those members of the profession who have received the higher or general education, and those who have only had the lower or merely special training, and this distinction will be recognised by the public and by the State, and by all who are zealous for the advance of human knowledge."

The feeling on the Continent on this subject may be judged of by the following circumstance. A prize was offered for an essay on the question, "Is it advisable that surgery and medicine should be united?" There were thirteen essays for the affirmative—one for the negative.

However, it is useless to hope that such weighty changes will be brought about without the interference of the State by way of a Royal Commission or Parliamentary Committee. Nearly all the reforms which we enjoy to-day were due to exposure of abuses before the Committee of the House of Commons which sat on the subject of medical education in 1834. To make this evident let me adduce a few instances.

Dr. Clendinning of Dublin was examined as to his having obtained the Oxford degree in 1827, before the parliamentary committee, 1834, as follows: "Did you keep an Act in physic? Yes. Was that a mere

form? I think it may be considered a mere form. Did you read a Latin thesis? Yes. Were you examined by the professor on the subject of the thesis? The professor was not present. Who was present? The gentleman-bedel. Was it not considered a mere ceremony? Yes. Was the thesis written specially for that occasion? I suppose I ought to state that I did not write the thesis—it was written for me and produced, and I read it, and the counterpart was read by the bedel." These abuses became gradually reformed and especially by the exertions of the present professor of medicine, one of the most erudite and noble gentlemen who have ever graced the profession of medicine. The ballot has been often abused—for instance, Sydenham, and in later years Wells, who discovered the connexion between rheumatism and cardiac disease, and between renal disease and albuminuria, were thus excluded from the London College of Physicians. When the rule of the same body excluding Scotch graduates was relaxed, the most famous physicians sought examination, and, it is said, Dr. Pearson in his 80th year set about making up his Greek, and died reading *Aretæus*. Nobility seems to have gained the fellowship, for on the roll of 1771 there occur the names of the Dukes of Richmond and Montague.

Up to 1834 the examination for the licence of the College of Physicians was in Latin, and for only thirty minutes; so that a man well versed in medical knowledge, but a little "sticky" in the classical tongue, might run great risk of rejection. Mr. Grainger stated that in 1834 two of the examiners of the London College of Surgeons were respectively eighty-three and ninety-five years old—that they alone occasionally examined a candidate, although they complained much of having to sit from 5 P.M. to 1 A.M.—sleep often having proved irresistible. Their faculty of hearing was also publicly impeached. Lastly, it was brought out by the same com-

mittee that the London Hall had received for the nineteen years after its charter (1815) £43,037 from candidates, yet had only expended £19,797 on officers, and as no museum or library was supported, the great residue had enriched shareholders in the trading firm.

Sir D. Corrigan has urged the appointment of a Royal Commission to investigate the medical profession, and especially the educational and licensing *bodies* through which it is recruited. Probably in *no other* way will the deficiencies which it has been our *duty to expose* in almost every page be corrected. However, these shortcomings and the remedies which they require are by *no* means novel, for, twenty years ago, in creating the fund for these essays Mr. Carmichael pointed them out when detailing the instructions to the essayists:

1st. "The state of the medical profession in its different departments of physic, surgery, and pharmacy, in Great Britain and Ireland, at the time of the writing of these prize essays."

2nd. "The state of the hospitals and schools of medicine, surgery and pharmacy."

3rd. "The state and mode of examination, or of testing the qualifications of candidates of the different licensing colleges or corporations in medicine, surgery, and pharmacy."

"Under these three heads, the authors will please to make such suggestions as may occur to them respecting the improvement of the profession, with the view of rendering it more useful to the public, and a more respectable body than it is at present. In these suggestions the authors will please to consider the preliminary and moral education of medical and surgical students, as well as the best mode of conducting their professional studies."

"In considering the third head, or mode of *testing* the qualifications of candidates by the licensing bodies, the authors will please to consider the most practicable

mode of rendering the examinations as demonstrative as possible—*i.e.*, in anatomy, by having the dead subject placed before the candidate; in chemistry, botany, and pharmacy, specimens of minerals, plants, and pharmaceutical preparations placed before him; and in the practice of physic and surgery, the candidate to be placed before the patients in the wards of an hospital, as the testator is certain that this will afford the most certain and only true mode of ascertaining the qualifications of candidates."

Impressed with the wisdom of the sentiments above indicated and publicly expressed, the writer of this essay has earnestly, but he feels imperfectly, endeavoured to illustrate them. Whatever may be the result of the competition, he fervently trusts that the wise and benevolent intentions of the founder may be realised by the diffusion and enforcement of these guiding principles. The world will then not only have profited by the deeds of Carmichael while living, but will be enlightened by the doctrines he promulgated by means of posthumous generosity. Nobly born, grand in person, rich in intellect, and favoured by fortune, the position he attained few can hope to reach; but his example and principles will excite in generations of physicians yet to come a resolve to follow in a becoming spirit their calling, which rejoices in having had even a Divine Exemplar.

THE END.

INDEX.

Aberdeen University, 189.
Accidental Poisoning, 78.
Advertising quacks, 98.
Age, 29, 119.
Amalgamation, 218.
American Schools, 163.
Anatomy, 144.
Apothecaries' Hall, 73, 188, 192.
Apothecary profession, 73.
Apprenticeship, 118.
Army service, 37.
Assistants, 69.
„ Irish, 71.
Association, Irish Medical, 17.
„ British, 16.
Asylums, 67.
Attendance, marking of, 160.

Barber surgeons, 12.
Bell as a lecturer, 142.
Benevolent societies, 88.
Bill of Sir J. Graham, 19.
„ of Mr. Warburton, 17.
Books, 173.
Botanic quacks, 97.
Botany, 152.
British Medical Association, 16.
Brodie, 3, 4, 10, 120, 176.
Burial inspectors, 53.
Byelaws, 200.

Cambridge University, 187.
Carmichael, 13, 18, 19, 30, 127, 200, 209, 221.
Catechetical teaching, 170.
Catholic University, 161, 195.
Catholic Surgeons, 135.
Charters, 11; of the Royal College of Surgeons, 200.
Chemistry, 152.
Clinical teaching, 120.
Collegiate residences, 114.
Comparative anatomy, 150.
Competitive test, 137.
Compulsory State examination, 212.
Concours, 138.
Cooper, Sir A., 35, 147.
Coroners, 47, 64.
Corrigan, Sir D., 148, 213, 221.
Credulity, 90.
Curriculum, 156, 210.

Death registration, 44.
Demonstrative examinations, 178.
Dental diplomas proposed, 205.
Dispensing assistant, 72.
Dissection, 145.
Drawing, 112.
Dublin hospitals, 128.
„ schools, 158.
„ licensing bodies, 191.
Durham University, 188.

Edinburgh University, 190.
„ Colleges, 191.
Education, preliminary, 107.
„ moral, 114.
„ professional, 118.
„ University, 195.
Elections, 134.
English licensing bodies, 184.

Enlightenment the remedy of quackery, 103.
Ethics, 33.
Examinations, 177.
Expense of education, 118.
„ of qualifications, 210.

Farr, Dr., 46.
Fees on diplomas, 210.
„ professional, 36, 68.
Female physicians, 12.
„ pharmacians, 83.
Foreign degrees, 213.

General practice, 68.
Glasgow University, 190.
„ Faculty, 191.
Graduation in arts, 112.
Graham, Sir J., Bill, 19.
Graves, Dr., 42.
Grinding, 170.

Health officers, 43, 52.
Homœopathy, 91.
Hospitals, 122.
Hunter, 5, 109, 141, 142, 149.
Hydropathy, 96.
Hygiene, 55, 104, 150.

Immoral advertisements, 102.
Indian Service, 40.
Infirmaries, 65.
Insurance, 54.
Irish physicians during epidemics, 4.
Irish Assistants, 71.
„ Licensing bodies, 191.
„ Medical Association. 17.
„ Poor Law Service, 59.

Latin and Greek, 108.
Lectures, 139.
Licensing bodies, 184, 208.
Literary and scientific physicians, 2.
Lock hospitals, 132.
London hospitals, 126.
„ schools, 158.
„ University, 188.
Longevity of medical men, 37.
Lowe, Mr. R., 108.
Lunatic asylums, 67.
Lying-in-hospitals, 130.

Malpractice, 36.
Marking attendance, 160.
Medical Act, 21.
„ Association, 17.
„ Council, 22.
„ Evidence, 49.
„ Press, 17.
„ Profession, 1.
„ Reform, 16.
„ Societies, 84.
„ Supervisors, 51.
Mesmerism, 98.
Multiplicity of licenses, 208.

Natural sciences, 110, 150.
Naval service, 40.
National University, 197.
Nepotism, 134.
Note-taking, 120.

Obstetrics, 15, 130, 154.
Officers of health, 43, 52.
Oxford University, 187.

Parliamentary representation, 8, 197.
Patents, 102.
Pearson, Dr., at Greek, 221.
Peerages, Medical, 11.
Pharmacy, 73, 153, 167.
Pharmaceutical Society, 74.
Physicians, Royal College of, London, 186; Scotland, 191; Ireland, 191.

Physiology, 148.
Post mortems, 124.
Poisons sold, 78.
Poor Law Service, England, 56; Ireland, 59; Scotland, 59.
Popular lectures, 103.
Practical examinations, 178.
Prevention, 2, 132.
Private teaching, 164, 170.
Prizes, 168.
Profession, 1.
Professors, examiners, 198, 203.
Progressive lectures, 156.
Proposed collegiate residence, 114.
Proposed dental diplomas, 205.
„ State examination, 212.
„ re-arrangement of licensing bodies, 218.
„ Medical Supervisors, 51.
„ changes in by-laws of Royal College of Surgeons, 203.
„ order of study, 156.
Purchase system, 136.

Quackery, 89.
Qualifications, 210.
Queen's University, 193.

Reading, 173.
Recreations, 117.
Registration, 25.
„ of deaths, 44.
Religious exclusiveness, 135.
Remuneration, 36, 68.
Representation in parliament, 8, 197; on Medical Council, 22.
Residences for students, 114.
Royal Society, 3.
„ Commission required, 220.
Rumsey, Dr., 48, 61.

Schools, 157.
„ of pharmacy, 167.
Sciences, natural, 110, 150.
Scotch licensing bodies, 189.
Separation of pharmacy, 79.
Services, public, 37.
„ poor law, 56.
Simon, views of Mr., 2.
Societies, 84.
Special hospitals, 132.
St. Andrew's University, 189.
State medicine, 43.
„ examination, 213.
Statistics of the profession, 6, 158, 164.
Stokes, Dr., 150, 220.
Students' societies, 84.
Success, requisites for, 31, 176.
Superannuation, 62.
Supervisors, medical, 51.
Surgeons, Royal College of, England, 185; Scotland, 191; Ireland, 199.
Surgery, 12, 31.
Syphilis, prevention of, 132.

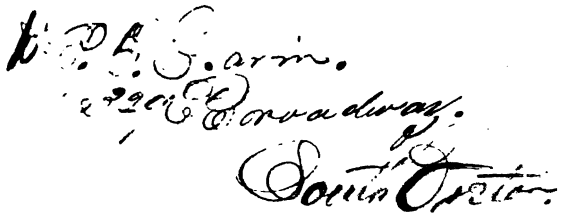
Text-books, 173.
Title, uniformity of, 217.

Uniform title, 217.
Union of medicine and surgery, 13, 219.
Universities, 195.
University of Oxford, 187; Cambridge, 187; Durham, 188; London, 188; St. Andrew's, 189; Aberdeen, 189; Glasgow, 190; Edinburgh, 190 Dublin, 192; Queen's, 193.
University representatives, 24.

Veterinary medicine, 151.

Warburton's bill, 17.
Widow's efforts, 77.
Workhouses, 66.
Young practitioners, 29.

MULLANY'S Steam Printing Works, 47 Fleet-street, Dublin.



COUNTWAY LIBRARY
HC 2MXT T